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**KICK-OFF MEETING**  
**FOR THE REVIEW OF THE**  
**REFERENCE DOCUMENT ON BEST AVAILABLE**  
**TECHNIQUES**  
**FOR SURFACE TREATMENT USING ORGANIC SOLVENTS**

**SEVILLE, 16 – 19 November 2015**

**DRAFT MEETING REPORT**

**INTRODUCTION**

The Technical Working Group (TWG) for the review of the Reference document on Best Available Techniques (BAT) for surface treatment using organic solvents (STS BREF) held its first plenary meeting at the IPTS premises in Seville, Spain on 16 – 19 November 2015. This record is a summary of this first meeting (also referred to as the kick-off meeting or KoM).

TWGs are set up to facilitate the exchange of information under Article 13(1) of Directive 2010/75/EU (IED) on Industrial Emissions (Integrated Pollution Prevention and Control).

The existing STS BREF (available on the European IPPC Bureau (EIPPCB) website at <http://eippcb.jrc.ec.europa.eu/reference/>) was formally adopted by the European Commission in 2007 under Directive 96/61/EC.

The activity of preservation of wood and wood products with chemicals (WPC) is a new activity introduced in the IED (Activity 6.10 of IED Annex I). A TWG was activated for this activity in July 2014 and a call for the expression of initial positions on the drawing up of the WPC BREF was sent by the EIPPCB on 6 October 2014. However, due to the limited number of WPC plants identified by Member States and because the STS BREF already covers wood preservation using solvents, it was decided to include the Annex 6.10 activities in the revised STS BREF. As a result, the WPC TWG was merged into the STS TWG. The IED Article 13 forum was advised of this by DG ENV in May 2015. The STS TWG was reactivated in December 2014 and the call for the expression of initial positions for the revision of the STS BREF was sent by the EIPPCB on 15 May 2015.

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This first plenary TWG meeting discussed the initial positions from TWG members for the review of the STS BREF based on an exchange of information between the members of the TWG set up for the purpose.

The Head of the EIPPCB and a JRC/EIPPCB staff member chaired the meeting and the STS BREF co-authors (the STS BREF review team of the EIPPCB) led the technical discussions.

The STS TWG is made up of more than 190 experts representing EU Member States (MS), Industry, Environmental non-governmental organisations (Env. NGOs) and Commission services. The kick-off meeting was attended by 67 TWG members (33 from MS, 26 from Industry, 1 from Env. NGOs and 7 from Commission services).

The meeting started on Monday 16/11/2015 at noon and finished on Thursday 19/11/2015 at noon (i.e. two full days and two half days). The meeting agenda included presentations and discussions on the exchange of information on best available techniques (as stipulated in Article 13 of Directive 2010/75/EU), on defining the scope of the work to review the STS BREF, on the key environmental issues to consider, on issues related to the data and information collection and on the structure and content of the revised STS BREF and the BAT conclusions (BATC). These discussions were covered during the first two and a half days of the meeting as well as a part of the final half day. On the final half day, the information exchange tools (i.e. BATIS) and the interim conclusions of the meeting were presented.

In order to facilitate discussions at the meeting, a background paper (BP) highlighting the items to be discussed was prepared by the EIPPCB and sent to the TWG members in advance of the meeting (14 October 2015). The items presented in the BP had been derived from the initial positions sent by the STS TWG as well as those received earlier from the original WPC TWG. In this context, an 'initial position' stands for suggestions, comments or wishes provided by member(s) of the TWG on the basis of the call for '*expression of initial positions for the review on the STS BREF*', sent by the EIPPCB on 15 May 2015, and of the documents attached to this. These WPC-related initial positions were reaffirmed with the collection of initial positions for the STS BREF review. The term 'EIPPCB proposal' used in this document refers to the way forward that the EIPPCB proposed to the TWG in the BP after taking into account the TWG members' 'initial positions'.

### **Meeting and structure of this meeting report**

During the meeting, discussions were held on the TWG members' initial positions and on the EIPPCB proposals made based on these. The key issues for which agreements were sought at the meeting were the scope of the revised STS BREF for the STS sectors, the scope of the WPC sector, the applied processes and techniques, the key environmental issues and the structure of the revised BREF. Furthermore, agreement was sought on what information and data would be exchanged in order to revise and improve the STS BREF (data and information collection) and on the basic principles of this collection.

The items were discussed following a common pattern at the meeting. The EIPPCB gave a presentation based on the background paper for each issue and proposed a way forward. The participants then had the opportunity to discuss each issue and ultimately reach a conclusion.

This document presents the main issues discussed for each item and the conclusions reached at the meeting. Under some items, an indication is given on when a task was assigned to the TWG in connection with the item.

All presentations delivered at the meeting are accessible to TWG members on the BAT Information System (BATIS) workspace together with the conclusion slides of the meeting.

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The presentation given by the DG Environment (DG ENV) representative stressed the importance of focusing the information exchange so that BAT conclusions are developed or updated for the key environmental issues of the STS sector. Any information that cannot be used to develop or update BAT conclusions would be assigned a lower priority. A member of the EIPPCB gave a general introduction on BREF reviews. During the meeting, ACEA made various short presentations related to the corresponding discussion item.

All these presentations are accessible to TWG members on BATIS.

As clarified at the kick-off meeting, the BREF Guidance for the exchange of information under the IED (i.e. Commission Implementing Decision 2012/119/EU of 10 February 2012) is an essential document for the future work of the STS TWG.

## Acronyms used in this document

Acronym	Meaning
ACE	Agricultural and construction equipment
BAT	Best Available Technique(s)
BAT-AEL(s)	BAT-Associated Emission Level(s) as defined in IED Article 3(13)
BAT-AEPL(s)	BAT-Associated Environmental Performance Level(s), including but not restricted to BAT-AELs
BAT-AEV	Emission values associated with BAT (term used in the BAT conclusions for the current STS BREF)
BREF	BAT Reference Document as defined in IED Article 3(11)
BREF Guidance	Guidance document on the exchange of information (Commission Implementing Decision 2012/119/EU)
BP	Background Paper
CLP	Classification, labelling and packaging
CMR	Carcinogenic, mutagenic or toxic to reproduction (reprotoxic)
CO	Carbon monoxide
CWW	Reference Document on Best Available Techniques on Common waste water and waste gas treatment / management systems in the chemical sector
D1	First draft
DMF	N,N-Dimethylformamide
ECM REF	Reference Document on Economics and Cross-Media Effects
EFS BREF	Reference Document on Best Available Techniques on Emissions from Storage
e-coating	Electro-coating
EIPPCB	European IPPC Bureau
ENE BREF	Reference Document on Best Available Techniques for Energy Efficiency
EMAS	EU Eco-Management and Audit Scheme
EMS	Environmental Management System(s)
Env. NGO	Environmental non-governmental organisation
E-PRTR	European Pollutant Release and Transfer Register
FMP BREF	Reference Document on Best Available Techniques in the Ferrous Metals Processing Industry
IED	Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions
IP	Initial position(s)
IPPC	Integrated Pollution Prevention and Control Directive 2008/1/EC (repealed and replaced by the IED)
KEI	Key environmental issue(s)
KoM	Kick-off meeting
LCP	Large combustion plant
LCP BREF	Reference Document on Best Available Techniques for Large Combustion Plants
MCP	Medium combustion plant
MS	Member State of the European Union
NO <sub>x</sub>	The sum of nitrogen monoxide (NO) and nitrogen dioxide (NO <sub>2</sub> ), expressed as NO <sub>2</sub>
OTNOCs	Other than normal operating conditions
PAHs	Polycyclic aromatic hydrocarbons
ROM	JRC Reference Report on Monitoring of emissions to air and water from IED-installations (Final Draft, 2013)
SOA	Secondary organic aerosols

<b>Acronym</b>	<b>Meaning</b>
SED	VOC Solvent Emission Directive 1999/13/EC (repealed and replaced by the IED)
STS BREF	Reference Document on Best Available Techniques on Surface Treatment Using Organic Solvents
STM BREF	Reference Document on Best Available Techniques on Surface Treatment of Metals and Plastics
SVHC	Substances of very high concern
TOC	Total organic carbon, expressed as C, includes all organic compounds
VOCs	Volatile organic compounds as defined in IED Article 3(45)
WB	Water-based
WBP BREF	BAT Reference Document for the Production of Wood-based Panels
WFD	Waste Framework Directive (2008/98/EC)
WP	Wood preservation
WPC	Preservation of wood and wood products with chemicals
WT BREF	Reference Document on Best Available Techniques for Waste Treatment
WWTP	Waste water treatment plant

## **Member States and Organisations (participants in the kick-off meeting)**

AT	Austria
BE	Belgium
CZ	Czech Republic
DE	Germany
DK	Denmark
FI	Finland
FR	France
IE	Ireland
IT	Italy
PL	Poland
PT	Portugal
RO	Romania
SK	Slovakia
ES	Spain
SE	Sweden
UK	United Kingdom
EEB	European Environmental Bureau
ACEA	European Automobile Manufacturers' Association
AFERA	The European Adhesive Tape Association
ASD	AeroSpace and Defence Industries Association of Europe
CEFIC	European Chemical Industry Council
CEPE	European Coatings Federation
CERAME-UNIE	European Ceramic Industry Association
ECCA	European Coil Coating Association
EMPAC	European Metal Packaging
EPF	European Panel Federation
ESVOGCG	European Solvent VOC Coordinating Group
EUROFER	European Steel Association

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EUROMETAUX	European Association of Metals
EWPM	European Wood Preservative Manufacturers Group
EWVG	European Winding Wire Group
FEPA	Federation of the European Producers of Abrasives
FPE	Flexible Packaging Europe
INTERGRAF	European Federation for Print and Digital Communication
ORGALIME	European Engineering Industries Association
WEI	European Institute for Wood Preservation

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## TABLE OF CONTENTS

Note: This meeting report follows a logical sequence of topics. The actual meeting followed a slightly different sequence to make the best use of time for discussion of topics.

<b>1</b>	<b>SCOPE .....</b>	<b>8</b>
1.1	ACTIVITIES AND SECTORS USING SOLVENTS.....	8
1.1.1	STS sectors in the current BREF .....	8
1.1.2	STS: Additional sectors .....	9
1.1.3	Water-based processes and waste water treatment techniques .....	10
1.1.4	Interface with other (B)REFs.....	10
1.2	WOOD PRESERVATION WITH CHEMICALS (WPC) ACTIVITIES AND SECTORS .....	12
1.2.1	WPC: Identification of sectors.....	12
1.3	APPLIED PROCESSES AND TECHNIQUES.....	14
1.3.1	Applied processes and techniques in the STS sectors .....	14
1.3.2	Applied processes and techniques in the WPC sectors.....	14
<b>2</b>	<b>KEY ENVIRONMENTAL ISSUES.....</b>	<b>17</b>
2.1	GENERAL KEY ENVIRONMENTAL ISSUES FOR STS ACTIVITIES .....	17
2.2	SECTOR-SPECIFIC KEY ENVIRONMENTAL ISSUES FOR STS ACTIVITIES .....	19
2.2.1	Emissions to water .....	19
2.2.2	Dust emissions to air.....	21
2.3	KEY ENVIRONMENTAL ISSUES FOR WPC ACTIVITIES .....	22
2.3.1	General KEI.....	22
2.3.2	Process step-specific environmental issues for WPC activities.....	22
2.4	ENVIRONMENTAL PERFORMANCE LEVELS FOR STS ACTIVITIES .....	24
2.4.1	Monitoring emissions – solvent management plans and mass balances.....	24
2.4.2	Other emissions to air .....	25
2.4.3	Emissions to water .....	25
2.4.4	Energy consumption .....	25
2.4.5	Averaging periods.....	26
2.5	ENVIRONMENTAL PERFORMANCE FOR WPC ACTIVITIES .....	27
<b>3</b>	<b>TECHNIQUES TO CONSIDER IN THE DETERMINATION OF BAT .....</b>	<b>28</b>
3.1	STS: TECHNIQUES TO CONSIDER IN THE DETERMINATION OF BAT .....	28
3.1.1	STS: Information and data collection on techniques to consider in the determination of BAT.....	28
3.2	WPC: TECHNIQUES TO CONSIDER (BAT CANDIDATES).....	29
<b>4</b>	<b>INFORMATION AND DATA COLLECTION.....</b>	<b>30</b>
<b>5</b>	<b>STRUCTURE.....</b>	<b>32</b>
5.1	BREF STRUCTURE.....	32
5.2	BAT CONCLUSIONS STRUCTURE .....	32
<b>6</b>	<b>FORWARD PLANNING FOR THE STS BREF REVIEW AFTER THE KICK-OFF MEETING .....</b>	<b>33</b>

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# 1 SCOPE

## 1.1 Activities and sectors using solvents

### 1.1.1 STS sectors in the current BREF

The data on number of installations, solvent consumption and VOC emissions received with the initial positions could not present a full picture of the STS sectors and there were significant differences among the corresponding figures received from Member States, Industry and relevant reporting schemes (SED implementation report, DG ENV list of IED installations).

For two sectors (i.e. manufacturing of mirrors and abrasives), the EIPPCB proposed to take account of the small number of installations and to revise the existing document only if information is currently available. It was also proposed to consider merging sectors with similar applied processes (i.e. the coating of ACE and trains with the coating of other metal surfaces) and merging this expanded sector with the sector of coating of plastic workpieces.

#### *Conclusions reached by the TWG for the revised STS BREF*

- For all sectors covered in the current STS BREF, to update information including candidate BAT (sector-specific and general).
- Abrasives and mirrors: do not develop specific questionnaires, update current technical information including candidate BAT if information is provided by the TWG.
- Focus on those installations/plants above the IED Annex I Activity 6.7 threshold.
- Without losing important information, as long as it is proves practical and does not jeopardise drafting generic and sector-specific BAT conclusions, to consider for the following activities:
  - First: merging technical information for the Trains and ACE sectors with Chapter 13 (Other Metal Surfaces) and collect information via questionnaires.
  - Second: merging Chapter 13 (Other Metal Surfaces) + Chapter 9 (Trains) + Chapter 10 (ACE) with Chapter 16 (Plastic Workpieces).
  - Consider forming a common section for the description of applied processes and techniques (Section X.2) for Chapters 6 (Cars), 7 (Vans and Trucks) and 8 (Buses).
- Aircraft: Remove the > 50 seat threshold that exists in the current STS BREF.

#### *TWG tasks*

- EIPPCB to confirm with the TWG (especially based on input from ASD, submitted before the end of 2015) whether coating of aerospace sub-assemblies is best dealt with in Chapter 12 (Aircraft) or Chapter 13 (Other Metal Surfaces).
- Ensure that cleaning (solvent and other types) is covered in the relevant activity section, e.g. for aircraft, in Chapter 12.

#### *Information identified or promised to be delivered by the TWG for the revised STS BREF*

- AT and BE to provide additional information on installations for the truck and bus coating sectors.

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### 1.1.2 STS: Additional sectors

During the initial positions collection phase, a number of activities not covered in the current BREF were identified, e.g. metallised (foil) paper production, PU panel production, self-adhesive labels, semiconductors, other coating and impregnation. Reported data for these activities (number of installations, levels of consumption/emissions) were not sufficient to fairly judge possible inclusion in the scope of the revised BREF while information on the main process description was missing.

For the sector of textile coating using DMF (N,N-Dimethylformamide, a CMR substance), a considerable number of installations (26) in four MS were identified and a process description was provided.

The EIPPCB pointed out that more information is needed, mainly related to the applied processes and the number of IED installations for each of these newly identified sectors. A brief collection of further information was proposed, from which newly identified sectors for possible inclusion in the scope of the revised STS BREF could be agreed.

There was a general agreement in favour of the EIPPCB proposals.

#### *Conclusions reached by the TWG for the revised STS BREF*

- To include textile coating using N,N-dimethylformamide (DMF) in the information and data collection.
- Other activities identified: self-adhesive labels; semiconductors; PU panel production; metallised (foil) paper production; any other coating or impregnation and any other potential activities. (For these, the collection of brief process descriptions and a list of well-performing installations is a TWG task, see below.)
- To include agreed activities (based on the assessment described in TWG tasks) in the information and data collection.

#### *TWG tasks*

- For newly identified activities other than textile coating using DMF, MS to provide brief process descriptions before the end of January 2016. For this purpose, a template and a completed example can be found on BATIS.
- MS to provide:
  - A completed template for each activity (not installation) including the estimated number of installations.
  - A list of potential well-performing installations for each activity.
- EIPPCB to assess the submitted process descriptions and to post its assessment on BATIS by mid-February 2016.
- TWG to comment by the end of February 2016.

#### *Information identified or promised to be delivered by the TWG for the revised STS BREF*

- Information promised by BE on measurement of DMF emissions from DMF-using activities.

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### 1.1.3 Water-based processes and waste water treatment techniques

The current STS BREF includes some discussion of water-based process steps (e.g. degreasing, phosphating) which are carried out in some sectors prior to solvent-based treatments, as well as the associated management and treatment of process and waste waters. These activities are identical to those that precede other surface treatments such as electroplating (electro-galvanising) and are fully described in the STM BREF. Emissions to water are independent of the subsequent processes, whether solvent-based (STS) or water-based (STM). This separation would help focus on the key environmental issues (KEIs).

In accordance with the BREF Guidance<sup>1</sup>, the EIPPCB proposed to not describe in the revised STS BREF water-based processes and techniques that are within the scope of the STM BREF and fully discussed there, but to cover in the revised STS BREF those water-based processes and activities which are only associated with STS activities. For these cases, data for deriving STS-specific BAT-AEPLs would be gathered as appropriate. Any relevant water-based technique (e.g. e-coating) could still be considered in the determination of BAT in the STS BREF<sup>1</sup> as appropriate.

There was a lengthy discussion of the proposal. Some participants wished to have all the relevant information in one BREF for ease of use, or to ensure that STS-related information and data would be collected. Some wished to focus only on those processes where water is 'in contact' or substituted for solvent-based systems. There was wide support for not duplicating information contained in the STM BREF.

#### *Conclusions reached by the TWG for the revised STS BREF*

- To cover in the revised STS BREF water-based (i.e. not organic solvent-containing) processes and techniques which are directly associated with STS activities.
- To consider any relevant water-based technique (e.g. electro-coating) as a technique to consider in the determination of BAT in the STS BREF, e.g. to reduce the use of solvents.
- Avoid duplication of information with the STM BREF and make appropriate cross-references to it.

### 1.1.4 Interface with other (B)REFs

The EIPPCB proposal pointed to the BREF Guidance<sup>1</sup> and the referencing of both 'vertical' and 'horizontal' BREFs, and the need to reduce repetition and to focus on STS sector-specific issues not covered elsewhere. It would be task of the TWG to ensure in the review that information is valid for the STS sectors concerned, and any STS-specific information, such as applicability, is added. As energy is an important issue in STS, it was noted that the ENE BREF includes applicability information but there are no 'horizontal' BAT-AEPLs.

There was a general agreement in favour of the EIPPCB proposals.

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<sup>1</sup> BREF Guidance, Section 1.1.2: 'Vertical' BREFs may include information on techniques which can help TWGs in deriving BAT for other sectors' and 'In order to facilitate the use of both 'vertical' and 'horizontal' BREFs in a complimentary way appropriate cross-references need to be made in other relevant 'vertical' and 'horizontal' BREFs'.

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***Conclusions reached by the TWG for the revised STS BREF***

- Not to duplicate relevant information available elsewhere, e.g. the ENE BREF.
- Take into account relevant information in other (B)REFs and include relevant references in the BREF text, e.g. for:
  - ENE, EFS, CWW, ROM.

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## 1.2 Wood preservation with chemicals (WPC) activities and sectors

### 1.2.1 WPC: Identification of sectors

In order to clarify which activities/processes fall within the scope of wood preservation with chemicals for the purpose of the STS BREF review, the EIPPCB proposed certain definitions and clarifications in the call for the WPC initial positions which were largely agreed on by the TWG.

It was proposed to include in the scope of the STS BREF wood preservation activities using biocides, such as water-based, solvent-based and creosote preservatives for the protection of wood, and it was highlighted that WPC activities are covered by Annex I to the IED as soon as one of the capacity thresholds (6.7 or 6.10) is exceeded.

The information received on chemical wood modification (acetylation, furfurylation, polymerisation) and hydrophobisation showed that these are only carried out in a few installations in the EU, which are most probably below the IED Annex I Activity 6.10 threshold. Therefore, chemical wood modification was not proposed as a sector to be covered in the revised STS BREF; however, chemical wood modification was proposed to be looked at as a technique to consider in the determination of BAT (BAT candidate).

Other, non-chemical, wood preservation processes, such as thermal wood modification (TWM), were not proposed to be included in the scope (as sector/activity under 6.10), since there is no chemical involved in the preservation. However, TWM was proposed as a technique to consider in the determination of BAT.

Certain chemical wood treatment processes used for colouring or disinfection purposes and certain short-term protection processes (sap stain treatment of freshly felled logs), were also not proposed for inclusion in the scope as they are not considered to be wood preservation processes.

Following the initial positions, the supercritical CO<sub>2</sub> process (wood impregnation using CO<sub>2</sub> as a carrier gas of the preservative) was explicitly proposed for inclusion in the scope as it is a wood preservation process using chemicals.

The discussion and feedback from the TWG during the KoM confirmed the proposals made by the EIPPCB. Regarding 'sap stain treatment' and 'blue stain treatment', it was clarified during the KoM that these are different treatments serving different purposes. It was decided to distinguish between sap stain and blue stain according to the definitions provided in CEN standard EN 1001-2.

#### *Conclusions reached by the TWG for the revised STS BREF*

- Define the term 'wood preservation', for the purpose of this BREF, as referring to activities with the purpose of protecting wood and wood products from the damaging effects of fungi, bacteria, insects, water, weather or fire; providing long-term conservation of structural integrity and improving the resistance of wood and wood products.
- Chemicals used in wood preservation are biocides, but also chemicals used for waterproofing (e.g. oils, emulsions) and chemicals used in chemical wood modification or hydrophobisation (such as acetic anhydride, furfuryl alcohol, silicones and others).
- Cover WPC activities using water-based preservatives, solvent-based preservatives and creosote.

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- Use the term 'chemicals used in wood preservation' instead of 'preservatives' when also referring to chemicals other than biocides.
  - Cover supercritical CO<sub>2</sub> as a special process and briefly describe it in the BREF (e.g. under 'Applied processes and techniques' under 'others') and include it in the information and data collection.
  - Not to include chemical wood modification and hydrophobisation as sectors and not to run a full data collection exercise by means of a questionnaire.
  - Collect information and data on chemical wood modification and hydrophobisation as a 'Technique to consider in the determination of BAT' as an alternative to the use of biocides.
  - Collect information and data on thermal wood modification as a 'Technique to consider in the determination of BAT' as an alternative, e.g. to the use of biocides.
  - Not to include thermal wood modification as a sector and not to run a full data collection exercise by means of a questionnaire.
  - Add clarification that ammonia treatment is not part of the scope of the BREF.
  - Clarify the meaning of the terms 'sap stain' and 'blue stain' using the definitions provided in CEN standard EN 1001-2.
  - Exclude from the scope activities exclusively treating against sap stain, but include sap stain treatment in the scope if it is a directly associated activity.
  - Include in the scope blue stain treatment for long-term protection of wood/wood products in service (e.g. window frame production).

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## 1.3 Applied processes and techniques

### 1.3.1 Applied processes and techniques in the STS sectors

The EIPPCB proposal was to collect structured information (by chapter) on applied processes based on the TWG feedback on the availability of such information.

#### *Conclusions reached by the TWG for the revised STS BREF*

- Revise Sections X.2 of the BREF to:
  - Improve clarity, accuracy and conciseness in all sectors.
  - Merge sections where there is commonality (based on the conclusions of the discussion on scope).
  - Update for changes: obsolescence, new techniques, accuracy, etc.
  - Keep non-organic solvent coating process steps where needed for consistency and clarity in explaining the various process steps and relationships in an installation.

#### *TWG tasks*

- TWG to start submitting information on BATIS for applied processes and techniques immediately after the KoM.
- EIPPCB to post by 27 November 2015 a draft timetable by chapter for information on applied processes and techniques to be submitted by the TWG by the end of Q1 2016.
- TWG to comment, e.g. on availability of information (date to receive/translate R&D report, etc.) before 11/12/2015. EIPPCB to provide a revised timetable by 15/12/2015.

### 1.3.2 Applied processes and techniques in the WPC sectors

With the call for initial positions, the EIPPCB proposed typical process steps and the usually applied processes to be described in the BREF. The following process steps were suggested:

- delivery, storage and handling of raw materials;
- preparation/conditioning of wood;
- preservative application processes;
- fixation, drying and storing of treated wood/wood products.

The majority of initial positions received supported the inclusion of the proposed process steps and applied processes in the 'Applied processes and techniques' chapter of the BREF. During the KoM discussion, reconditioning of creosote and incising of wood were proposed as additional applied processes to be included.

The TWG agreed with the proposal of the EIPPCB not to cover combustion plants for energy supply or indirect heating purposes in WPC plants as these are covered by Chapter III of the IED and the LCP BREF; and by the new MCP Directive recently agreed by the European Parliament and the Council.

#### *Conclusions reached by the TWG for the revised STS BREF*

- Cover under 'Applied processes and techniques' the following sequential process steps:

#### **1. Delivery, storage and handling of raw materials**

- Wood, preservatives, auxiliaries (e.g. oil, grease, lubricants)
- Preparation of preservative mixtures

- 
- Reconditioning of creosote.

## **2. Preparation/Conditioning of Wood**

Mechanical processing

- Debarking/peeling
- Cutting, planing, drilling
- Bundling, piling
- Incising.

Conditioning (adjustment of moisture content)

- Seasoning/air drying yards
- Steam conditioning/vapour drying
- Boulton process/heating in solvent (boiling under vacuum)
- Kiln drying.

## **3. Preservative/chemicals application processes**

### **3.1 Non-pressure processes**

- Brushing
- Spraying/spray tunnel
- Deluging
- Dipping/Immersion
  - Brief dipping
  - Trough impregnation
  - Hot-cold bath treatment.

### **3.2 (High/Low) Pressure processes**

#### **High pressure**

- Full cell process ('Bethell')/Vacuum-pressure process (+ variations)
- Empty cell process (variations: Lowry, Rueping process)
- Alternating pressure/modified alternating pressure.

#### **Low pressure**

- Double vacuum process.

## **4. Fixation, drying and storing of treated wood/wood products.**

- Provide a brief description of the process steps, environmental relevance and indication of potential emission reduction techniques based on available information (i.e. reports already posted on BATIS).
- Where necessary (e.g. mechanical processing of wood, kiln drying), provide an indication in the text as to why a given process step is not covered in detail in the other BREF chapters (BAT candidates, BAT conclusions, etc.).
- Until information is provided on the application of mechanical wood processing after preservation/chemical treatment and its environmental relevance, not to include it in the scope of the STS BREF.

## **Other associated activities**

### **Combustion plants for direct heating**

- Not to collect information and data for on-site combustion plants for direct heating (i.e. generating hot gases that are used for direct contact heating, drying or any other treatment of objects or materials).

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### **On-site waste management / waste treatment**

- Cover on-site waste prevention, waste management and waste treatment techniques in the STS BREF and therefore include these issues in the information and data collection exercise by means of a questionnaire.
- Not to cover in detail, but to cross-reference relevant BREFs, (e.g. WT BREF, WI BREF, LCP BREF) if the waste treatment processes are described in these BREFs.

### **On-site water management/ waste water treatment**

- Cover on-site waste water prevention, water management and waste water treatment techniques in the STS BREF and therefore include these issues in the information and data collection exercise by means of a questionnaire.

### **Site remediation**

- Not to cover the soil and groundwater remediation and treatment activities (clean-up) of contaminated sites.
- Cover in the WPC sections of the revised STS BREF techniques to prevent and reduce emissions to soil and groundwater.
- Refer to the European Commission Guidance concerning baseline reports under Article 22(2) of Directive 2010/75/EU on industrial emissions (2014/C 136/03) in the STS BREF – where appropriate.

### ***Information identified or promised to be delivered by the TWG for the revised STS BREF***

- FR to provide information on specific uses of biocidal product types PT8 and PT18 (according to Annex V to Regulation (EU) No 528/2012 concerning the making available on the market and use of biocidal products) and relevant requirements.

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## 2 KEY ENVIRONMENTAL ISSUES

### 2.1 General key environmental issues for STS activities

The initial positions expressed by TWG members considered in general VOC emissions to air and energy consumption as the top priority issues for all STS sectors. Under VOC emissions, there are considered both: channelled/fugitive emissions and total emissions as derived from the solvent management plans. In addition, specific attention was given to the use and emissions of substances carrying the CMR hazardous statements and of substances of very high concern (SVHC).

Emissions to soil and groundwater were rated as having a smaller environmental impact for the majority of STS sectors and the same occurred for raw material consumption and waste management.

The EIPPCB proposal echoed the TWG positions in relation to VOC emissions to air and energy consumption. Additionally, the EIPPCB proposal considered emissions to soil and groundwater, raw material consumption and waste management as KEI for all STS sectors. The discussion showed that the EIPPCB proposal was generally acceptable. Based on a TWG proposal, the expansion of the proposed KEI for waste management to also include waste generation was considered.

During the discussion, some TWG members expressed their preference to consider NO<sub>x</sub> and CO emissions as KEI for all the sectors where thermal waste gas treatment systems are used, due to the number of such systems in operation, the levels of emissions and the fact that in some MS relevant ELVs are applied in the permits. It was agreed to collect the available information on the number of installations and the level of NO<sub>x</sub> and CO emissions in order to assess the possible consideration of these emissions as a KEI and for which sectors.

In addition, during the KoM, concerns about the use and emissions of substances carrying the CMR hazardous statements and of substances of very high concern (SVHC) in all STS sectors were expressed, asking for consideration of these substances as KEI for all sectors. The conclusion of the discussion was to run an information/data collection exercise and to assess the collected information in order to decide which sectors and which substances could be considered for the review process. It is also noted that input quantities (usage) and emissions of substances carrying CMR hazardous statements and SVHC are considered in the discussion of environmental performance levels for STS activities (see Section 2.4.1).

#### *Conclusions reached by the TWG for the revised STS BREF*

- Gather plant-specific data (on waste gases, fugitive emissions, total emissions and energy consumption) for all STS sectors, according to the outcome of the scope discussion, with the aim of:
  - Deriving BAT conclusions and BAT-AELs for VOC emissions to air.
  - Deriving BAT conclusions and BAT-associated specific energy consumption levels where appropriate.
- Collect information for updating information on applicable techniques for all STS sectors according to the outcome of the scope discussion, on the following KEI:
  - Emissions to soil and groundwater of organic solvents and other chemicals.
  - Consumption and type of raw materials, especially of solids and organic solvents in order to:
    - update factors for the calculation of total VOC emissions;

- 
- propose techniques to reduce material usage and therefore solvent usage and VOC emissions.
  - On-site waste prevention, waste management and waste treatment techniques.

In addition:

- For noise emission abatement techniques, to update the current text only if fresh information is readily available and include conclusions in the general BAT for EMS.
- To update the information related to water usage in the description of the techniques.

Not to collect plant-specific data and contextual information on the following issues:

- Secondary organic aerosols (SOA).
- CO<sub>2</sub> emissions.
- Odour emissions.

#### ***TWG tasks***

- Using a template that the EIPPCB will provide, TWG to upload data on BATIS before the end of 2015, including:
  - Substances carrying hazardous statements (CMR) and SVHC that are used and/or emitted from STS activities.
  - Number of installations and level of NO<sub>x</sub> and CO emissions from thermal waste gas treatment.
- EIPPCB to assess the submitted data and to post its assessment on BATIS before 29 January 2016.
- TWG to comment by the end of 15 February 2016.

#### ***Information identified or promised to be delivered by the TWG for the revised STS BREF***

- AT to provide information on NO<sub>x</sub> and CO emissions.

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## 2.2 Sector-specific key environmental issues for STS activities

### 2.2.1 Emissions to water

The initial TWG positions stated that emissions to water (of solvents, metals and/or biocides, depending on the activity) is a key environmental issue for a number of STS activities, namely: flexography, and coating of: ACE, aircraft, ships and yachts, coil, metal packaging and furniture and wood material.

The EIPPCB proposal was to consider:

- Solvent emissions to water only for the activities that have processes in which there is contact between water and solvents.
- Biocide and metal emissions to water only for those STS activities in which there is the potential for waste water contamination by biocides and/or metals, such as: coating of ships and yachts (biocides), coating of aircraft (metals, especially CrVI).

During the KoM, some TWG members asked for a broader consideration of metal emissions to water for more sectors than the proposed. This was relevant due to the inclusion in the scope of water-based pretreatment process steps as directly associated activities. On the other hand, there was a general concern, expressed mainly by industry representatives, about the relevance of metal emissions to water for various STS activities and the observed levels. As an outcome of the discussion, it was agreed to collect sector-specific available information and data on this issue and the subsequent assessment will show the potential of considering metal emissions to water as a KEI and for which sectors, in order to derive any relevant BAT conclusions and BAT-AEPLs.

#### *Conclusions reached by the TWG for the revised STS BREF*

To collect data and contextual information with the aim of deriving BAT conclusions and, if possible, BAT-AELs for emissions to water for the following sectors:

- Chapter 2.C - Publication gravure: toluene.
- Chapters 6. 7. 8. 13. (+9.+10.) 16. 17. - Coating of cars, trucks, buses, other metal surfaces, plastic workpieces, furniture and wood materials: Solvents and suspended solids. Parameters: TOC/COD, TSS.
- Chapter 11. - Coating of ships and yachts: Solvents, biocides and suspended solids. Parameters: TOC/COD, biocides, TSS.
- Chapter 12. - Coating of aircraft: Solvents, suspended solids and metals. Parameters: TOC/COD, TSS, metals (including CrVI).

#### *TWG tasks*

- Using a template that the EIPPCB will provide by 27 November 2015, TWG to provide data with information on metal discharges to water by sector. The filled-in templates to be uploaded on BATIS by the end of 2015. The information to be requested is related to:
  - Which metals and in which form (total or dissolved)
  - The processes which are the source of these emissions
  - If discharged directly to water bodies or indirectly via sewer
  - Identify/assess specific environmental issues caused by metal emissions
  - If techniques are available and applied to reduce metal emissions
  - Sampling type, frequency, analytical methods and data availability.

- 
- EIPPCB to assess the submitted data and to post its assessment on BATIS before 29 January 2016.
  - TWG to comment by the end of 15 February 2016.

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## 2.2.2 Dust emissions to air

The initial TWG positions confirmed that dust emissions to air are important only for a limited number of sectors, where overspray could result in this type of emissions to air.

The EIPPCB proposal was to collect data and contextual information for a number of sectors and to derive related BAT conclusions and, if possible, BAT-AELs.

### *Conclusions reached by the TWG for the revised STS BREF*

To collect data and contextual information with the aim of deriving BATC and, if possible, BAT-AELs for dust emissions to air for the following STS sectors:

- Chapter 6. Coating of passenger cars
- Chapter 7. Coating of vans, trucks and truck cabs
- Chapter 8. Coating of buses
- Chapter 11. Coating of ships and yachts
- Chapter 12. Coating of aircraft
- Chapter 13. Coating of other metal surfaces (including coating of trains and Agricultural and Construction Equipment - ACE)
- Chapter 16. Coating of plastic workpieces
- Chapter 17. Coating of furniture and wood material.

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## 2.3 Key environmental issues for WPC activities

### 2.3.1 General KEI

With the call for expression of initial positions, the EIPPCB proposed a set of potential KEI for the WPC activities. The TWG members were invited to rate the importance of the proposed KEI and to provide feedback in their initial positions. Based on the initial positions, five general KEI issues were proposed for the WPC activities and agreed upon by the TWG during the KoM.

#### *Conclusions reached by the TWG for the revised STS BREF*

- Focus the information and data collection on the following general KEI (for some KEI only qualitative information may be available):
  - I) Potential emissions of chemicals used in wood preservation (biocides, metals, solvents and PAHs) to soil and water (including surface water, groundwater and sewer).
  - II) Emissions to air (e.g. VOCs, PAHs, odour, CMR substances, SVHC) from solvent-based and creosote processes.
  - III) Hazardous waste (e.g. waste chemicals used in wood preservation containing biocides, metals, solvents) or waste contaminated with chemicals used in wood preservation.
  - IV) Waste from water management/waste water treatment (waste oil/sludge).
  - V) Energy consumption and efficiency for creosote processes and autoclave processes.
- Not to include as general KEI:
  - Risk of fire or calamity.
  - Historic contamination of soil, groundwater and surface water.

#### *Information identified or promised to be delivered by the TWG for the revised STS BREF*

- AT, DE and SE to provide information on the use and emissions of CMR and SVHC (in due time for the development of the questionnaires for the data collection).

### 2.3.2 Process step-specific environmental issues for WPC activities

In order to identify the relevant process steps in the WPC sector with regard to emissions and to ascertain process step-specific KEI, the TWG was asked in the initial positions to look into the environmental issues for the individual process steps as proposed by the EIPPCB. Based on the initial positions, the EIPPCB proposed process step-specific KEI for the discussion during the KoM, indicating their correlation to the proposed general KEI (discussed under Section 2.3.1).

The TWG agreed in general with the proposed process step-specific key environmental issues.

#### *Conclusions reached by the TWG for the revised STS BREF*

- Focus the information and data collection on the following potentially polluting process steps and emission routes (for some KEI only qualitative information may be available):

Delivery/storage/handling of raw materials

- 
- Accidental leakages of wood preservatives/chemicals used in wood preservation and solvents from the storage vessels (KEI I).
  - Emissions to air (including aerosols and vapours) from storage vessels (KEI II expanded).
  - Wastes (sludge from tanks, sumps, etc.) from maintenance and cleaning (KEI III).
  - Emissions to air and water, and wastes from creosote reconditioning (KEI I, KEI II, KEI III, KEI IV).

Preservative/chemicals application processes (as agreed under 'Applied processes and techniques' (refer to point 3 of slides 19 & 20))

- Aerosol and vapour emissions to air from non-pressure and pressure processes (including treatment vessel, cylinder door, process tank, work tank vents, etc.) (KEI II expanded).
- Drips and spills of preservatives from treatment vessels, cylinder door, etc. (KEI I).
- Energy consumption and efficiency (creosote processes, autoclave processes) (KEI V).

Impregnation with hydrophobisation agents

- Drips or spills of hydrophobisation agents (KEI I).
- Organic compounds emissions to air (KEI II expanded).

Fixating, drying and storing of treated wood/wood products

- Drips of preservatives (KEI I).
- Emissions to air and odour from the working area (before preservatives/chemicals used in wood preservation are fixated and treated wood is dry) for solvent-based preservatives and creosote (KEI II).
- Surface run-off and seepage from storage of treated wood before preservatives/chemicals used in wood preservation are fixated and treated wood is dry (KEI I).

Auxiliary processes / thermal oxidation - WGT

- Collect NO<sub>x</sub> and CO emission data for thermal oxidation/WGT (for plants using solvent-based preservatives and creosote).

Not include in the information and data collection:

- Emissions to air from vehicles (transport of wood on site).
- Emissions to air (dust, small wood particles, wood residues) and noise resulting from mechanical wood processing.

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## 2.4 Environmental performance levels for STS activities

### 2.4.1 Monitoring emissions – solvent management plans and mass balances

The EIPPCB proposal was, in addition to the use of total VOC emissions in expressing BAT-AELs (as in the current BREF), to collect data and derive BAT-AELs for channelled waste gases and fugitive emissions. The proposal was supported by the TWG. Also, the TWG supported the collection of contextual information related to emission calculations based on solvent management plans/mass balances and solvent reduction schemes e.g. solid content, multiplication factors (where applicable). Data on consumption and emission of CMR substances and SVHC, as well as ELVs from permit data, were also proposed as important.

Further, based on initial positions it was proposed:

- For the automotive coating sector: to express total VOC emissions only in  $\text{g/m}^2$ .
- To seek clarification of the calculation of the coated surface area. This is not applicable for the automotive coating sectors where the e-coated area calculation methodology is given in Part 3 of IED Annex VII).

The EIPPCB also proposed to review and update the information on the removal efficiency of waste gas treatment techniques, included in Annex 24.9 of the current STS BREF, and to include this information properly in the dedicated sections of the STS BREF.

For the coil coating sector, it was commented that the proposed performance levels (as total VOC emissions) are not suitable due to the specificities of the applied coating processes and of the dimensions of the coated substrates.

#### *Conclusions reached by the TWG for the revised STS BREF*

- To express BAT-AELs for total VOC emissions as in the current BREF.
- To collect VOC emission data from continuous and discontinuous waste gas monitoring and fugitive emissions, in order to derive BAT-AELs for VOC emissions in waste gases and for fugitive emissions.
- To collect all the necessary contextual information at the installation level related to operational data that are taken into consideration in emission calculations, such as:
  - Solvent management plans, mass balances data and solvent reduction schemes in order to derive BAT-AELs as total emissions values.
  - Consumption and emission of VOCs which carry the hazard statements set in IED Article 59(5) or listed as SVHC.
  - Emission limit values from permits.
- For total emissions from the car sector, to collect data and express BAT-AELs only in  $\text{g VOC/m}^2$ .
- For all STS sectors in the scope except automotive coating, to seek clarification of the calculation of the surface area when total VOC emissions are given in  $\text{g/m}^2$ .
- For the coil coating sector, to seek clarification on the most appropriate way to express total VOC emissions.

- 
- TWG to review and update the information included in Annex 24.9 of the current BREF on the removal efficiency of waste gas treatment techniques and to include this information in the dedicated waste gas treatment section(s) of the STS BREF.

#### **2.4.2 Other emissions to air**

For other emissions to air from STS activities, the EIPPCB proposal was to collect data and information taking into account the agreed sector-specific KEIs, the cross-media of applicable techniques and the data availability. Other emissions to air concern mainly NO<sub>x</sub> and CO emissions from thermal waste gas treatment processes and dust. For these emissions, the TWG agree with the EIPPCB proposal to collect data on channelled emissions in mg/Nm<sup>3</sup>.

##### ***Conclusions reached by the TWG for the revised STS BREF***

- To collect data and contextual information on emissions of other substances to air (e.g. dust, NO<sub>x</sub>, CO) in mg/Nm<sup>3</sup> based on the consideration of the sector's KEI, the cross-media effects of applicable techniques and the data availability.

#### **2.4.3 Emissions to water**

For emissions to water, the EIPPCB proposal was to collect data in mg/l for the relevant sectors according to the KEI discussion.

##### ***Conclusions reached by the TWG for the revised STS BREF***

- To collect data for emissions to water in mg/l for the relevant sectors.
- TWG to provide information as soon as possible on the availability of waste water emission data, their format and averaging period. In the event of concentration values not being measured in the sector (data not available), choose units for which data are available.

#### **2.4.4 Energy consumption**

The TWG initial positions stated the need to use a single unit for the expression of energy consumption (e.g. kWh per unit of production) and to clearly define whether energy consumption refers to primary energy usage, to meter readings or recovered energy. The importance of clear definition of installation boundaries for the collection of energy consumption data in order to collect comparable data was also underlined.

The EIPPCB proposal echoed the TWG views and also highlighted the need to investigate the potential consideration of energy consumption as a barrier to application of substitution techniques and the increased energy consumption associated with thermal waste gas treatment especially in the case of seeking low levels of VOC emission concentrations.

##### ***Conclusions reached by the TWG for the revised STS BREF***

- To collect energy consumption data (clearly defining whether data refer to primary energy consumption, meter readings, recovered energy, exported energy, etc.) in kWh per unit of production (e.g. kWh/1000 m<sup>2</sup>). Where this is not possible, to collect data against another throughput or consumption unit (e.g. kWh/t solids applied).

- 
- To investigate energy requirements as a cross-media effect and a potential barrier to:
    - Applying water-based inks or paints.
    - Achieving low levels of VOC emissions in thermal waste gas treatments by burning natural gas.

#### **2.4.5 Averaging periods**

Initial TWG positions in general agreed with the EIPPCB proposal to consider long-term averaging periods (yearly) for total VOC emissions and short-term averaging periods (daily) for channelled ones.

There was a request from some TWG members during the KoM to consider only direct discharges to water for setting BAT-AELs and also asking to consider only direct emissions for the determination of KEI for the related sectors. Other TWG members considered that indirect emissions should also be addressed as in many cases the subsequent waste water treatment steps have no impact on specific discharges (e.g. metals). The outcome of the discussion was to consider short-term averages for the expression of direct emissions to water bodies but not to modify the conclusions of the discussion related to the sector-specific KEI.

##### ***Conclusions reached by the TWG for the revised STS BREF***

- To express BAT-AELs for total (including fugitive) VOC emissions to air as annual averages.
- To express BAT-AELs for VOC emissions via waste gases as short-term averages (daily averages for continuous measurement and as averages over the sampling period for periodic measurement).
- To express BAT-associated energy efficiency levels as annual averages.
- To express BAT-AELs for dust emissions as short-term averages (subject to data availability).
- To express BAT-AELs for direct discharges to water using short-term averaging periods (24-hour flow-proportional composite samples), subject to data availability.

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## 2.5 Environmental performance for WPC activities

In the initial positions submitted there was limited information on performance parameters and on which emissions/parameters should be considered for WPC activities.

The EIPPCB proposed to collect data and contextual information on: emissions to air for solvent-based and creosote-using WPC activities; emissions to waste water, surface run-off and groundwater; and energy consumption and efficiency. This proposal was, with addition of some parameters, agreed by the TWG.

### *Conclusions reached by the TWG for the revised STS BREF*

#### **Emissions to air from solvent-based and creosote installations**

- Collect VOC emission data (channelled emissions) as C concentration (in mg/Nm<sup>3</sup>) for solvent-based WPC installations.
- Collect data on fugitive emissions to air as a percentage of solvent input and total emissions in kg/m<sup>3</sup> of treated wood.
- Collect all the necessary contextual information at the installation level related to operational data that are taken into consideration in the emission value calculation, such as:
  - Organic solvent management plans/mass balances (including organic solvent inputs and outputs, assumptions made, calculation methods, etc.).
  - Implementation of reduction schemes (with related considerations).
  - Short-term emission data from continuous and discontinuous monitoring of waste gases.
  - Emission limit values from permits.
- Collect emission data for PAHs, CMR, SVHC, naphthalene and benzene for creosote-using processes as concentrations for channelled emissions, and include in the information and data collection fugitive emissions of PAHs and benzene.

#### **Emissions to water**

- Include in the information and data collection emissions to surface water or sewers (for identifiable discharge points at WPC sites in order to assess the effectiveness of the preventative measures) including relevant contextual information at least for the following parameters: biocides (based on list of authorised biocidal products for wood preservation), metals (Cu, Cr), solvents, PAHs (especially benzo[a]pyrene), benzene and oil.
- Include in the information collection the monitoring of potentially receiving media: surface waters in the vicinity of WPC installations, soil and groundwater.

#### **Energy**

- Include in the information and data collection energy consumption (total consumption and specific/production-related consumption in kWh/m<sup>3</sup> wood/wood product) and energy efficiency together with the relevant contextual information (including the process boundaries used).

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### **3 TECHNIQUES TO CONSIDER IN THE DETERMINATION OF BAT**

#### **3.1 STS: Techniques to consider in the determination of BAT**

The initial TWG positions indicated that some of the techniques in the current BREF are now considered obsolete; the majority of the valid ones need updating and completion of the available information. In addition, new techniques to consider in the determination of BAT for various STS sectors were proposed.

The EIPPCB proposal to collect information on new BAT candidates and to complete/update the information on existing ones based on the 10-heading structure was supported with only a consideration of time constraints.

##### *Conclusions reached by the TWG for the revised STS BREF*

- To collect information and data on new BAT candidates and to complete/update information on current techniques based on submissions from the TWG.
- The information should be provided following the provisions of the BREF Guidance and in particular covering the 10-heading structure.
- To collect this information in two rounds:
  - By the end of Q1 2016, for basic information (e.g. corrections to technique titles, update/provide brief description of techniques) for use in the detailed questionnaire development.
  - With a target of the end of Q2 2016, for a full update/drafting of existing or new techniques in the 10-heading structure.

##### **3.1.1 STS: Information and data collection on techniques to consider in the determination of BAT**

The discussion related to the information and data collection on techniques to consider in the determination of BAT was mainly focused on how this can be done in an organised and structured way in order to avoid duplication of effort, overlaps and repetition. It was agreed that this information is to be mainly submitted by those TWG members that already stated that they have it available.

##### *Conclusions reached by the TWG for the revised STS BREF*

- In order to avoid overlaps and repetition, information and data to be submitted by sector in a coordinated way by TWG members that already stated that they have it available.

##### *Information identified or promised to be delivered by the TWG for the revised STS BREF*

- For general issues: ESVOCCG (in addition, AT for waste gas treatment and solvent recovery).

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- For specific issues/sectors: ECCA/EUROFER for coil coating; ACEA for cars, vans and trucks, buses, other metal surfaces, plastic workpieces; INTERGRAF for printing; FPE for flexible packaging; EWWG for winding wires.

### **3.2 WPC: Techniques to consider (BAT candidates)**

The EIPPCB provided with the call for initial positions a preliminary list of potential techniques to consider in the determination of BAT for the TWG to comment and provide information on, together with an indication of any missing techniques. Some of the techniques proposed to be considered for the determination of BAT do not fall under the proposed scope of the BREF. The EIPPCB clarified that it was not necessary for a technique to be part of the scope of the BREF to qualify as a BAT candidate, e.g. chemical wood modification or thermal wood modification.

Together with the feedback on proposed BAT candidates, a number of additional candidate techniques were proposed by the TWG, some of which were already included in the initially proposed list.

#### ***Conclusions reached by the TWG for the revised STS BREF***

- Collect information on chemical wood modification, thermal wood modification and the supercritical CO<sub>2</sub> process for their inclusion as BAT candidates.
- Include information on techniques for noise reduction under 'Storage and handling of raw materials' based on available information (no detailed data collection).
- Provide in the STS BREF BAT candidates addressing the agreed KEI for the relevant process steps.
- TWG to provide the necessary information for the presentation of the BAT candidates (following the 10-heading structure).

#### ***Information identified or promised to be delivered by the TWG for the revised STS BREF***

- FR to provide information on BAT candidates for brief dipping and spraying/spray tunnels.
- EIPPCB to update the list of BAT candidates (providing: concise titles, short descriptions, indicating for which BAT candidates a more detailed description is needed) by mid-December 2015 and to post it on BATIS.
- DE, UK, EPF, EWPM, WEI to assist in the updating of the BAT candidate list (via e-mail exchange).
- TWG to indicate by the end of January 2016 in the updated list for which of the BAT candidates they can provide information and data (following the 10-heading structure).
- TWG to provide by end of Q1 2016 a more detailed description for those BAT candidates that were highlighted as needing a more detailed description.
- TWG to provide the information on the proposed BAT candidates, e.g. in the framework of the detailed information and data collection by means of the sector-specific questionnaires.

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## 4 INFORMATION AND DATA COLLECTION

The aim of the questionnaire is to collect a sufficiently wide range of data and contextual information to be able to derive sound BATC.

Due to the number of sectors/activities covered in the STS BREF (both STS and WPC), the EIPPCB proposal was to develop a number of questionnaires for the collection of data and contextual information. Effort would be focused on capturing the particularities of each sector while trying to keep the total number of questionnaires as low as possible (by providing questionnaires that will be suitable for a number of sectors/activities). The installations participating in the data collection should fulfil minimum criteria so that representative, reliable, real-life data could be collected.

In order to ensure the quality, completeness and consistency of the data provided via the completed questionnaires, and to ensure the appropriate management of confidentiality issues, the EIPPCB proposed that the Member States check them before posting them onto BATIS, after the confidential part has been extracted when justified.

It was decided that the TWG will initially propose a list of environmentally well-performing plants/installations.

It was also decided to collect data in principle for the period 2015-2014-2013, but depending on sector-specific data availability and variability. Based on the latter, this period could be longer in the case of sporadic measurement campaigns or shorter if the variability of monitored data justifies this.

### *Conclusions reached by the TWG for the revised STS BREF*

- TWG to collect data using sector(s)-specific questionnaires.
- TWG to collect data in all sectors covered in the BREF scope as agreed and to include in the questionnaire the agreed KEI.
- TWG to collect representative, reliable, real-life data, at least at installation level, from a manageable number of installations, that as a minimum fulfil the following criteria:
  - they are representative of the sector as a good environmental performer, including best performers;
  - they are representative of the sector in terms of materials, processes and techniques used, products, size (in terms of capacity), age (of process line(s): recent, less recent and upgraded) and geographical location within EU;
  - they are willing to participate and have data available.
- Collect data in principle for the period 2015-2014-2013, but depending on sector-specific availability and variability.
- Draft questionnaires will be tested by a small number of installations as a quality check, before release. It is therefore necessary to have available a list of installations proposed to participate in the data collection.
- Ensure that the following points are covered in the template to propose installations:
  - Rationale for proposing the installation/plant as well-performing or best-performing.
  - Which BAT candidates are used by the installation.

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## Data collection process

- Member State (MS) representatives where the plants are located will send the final questionnaire templates to and collect the filled-in versions from operators. They will run a first external quality assurance check.
- A further quality check of submitted data is the responsibility of all TWG members.
- Each Member State representative is asked to:
  - Ensure the quality, completeness and consistency of data.
  - Check the validity of confidentiality claims: if some information is claimed to be confidential, the MS representative extracts the confidential part of the questionnaire and sends this separately to the EIPPCB by email with the accompanying justification.
  - Upload non-confidential questionnaires onto BATIS.
- If the MS representative is not participating in the TWG, filled-in questionnaires will be sent directly to the EIPPCB.

## Confidentiality

- The requested information concerns mainly emission and consumption data as well as contextual information on techniques and processes.
- Emission data are generally considered non-confidential as they are considered to be in the public domain.
- If any information submitted to the EIPPCB is considered confidential and should therefore not be made publicly available or reported directly in the BREF, this should be clearly stated when submitting the information. Any such confidentiality claim is expected to be brought directly to the corresponding MS and the EIPPCB with the relevant legal justification.
- Any confidential data which could be required in the BREF will subsequently be anonymised and included only after prior agreement with the provider of the data (see also Section 5.3 of the BREF Guidance (2012/119/EU)).

## TWG tasks

- Questionnaires will be developed in Q1 of 2016.
- A draft template for TWG members to propose candidate installations for the data collection is available on BATIS.
- Deadline for proposing installations: end of January 2016.

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## 5 STRUCTURE

### 5.1 BREF structure

The initial positions expressed by the STS TWG on the BREF structure were manifold, mainly focused on:

- Merging of sectors where possible.
- Creation of subchapters for the coating of trucks, vans and truck cabs sector.
- Avoidance of references to other chapters or BREFs.
- Renaming of some sectors for better clarity.

The EIPPCB had presented a draft proposal for the potential structure of the revised BREF with the call for initial positions. The proposal is based on the possible merging of some sectors entirely or only for the applied processes and techniques sections (X.2) according to the conclusions of the discussion on the scope and the commonalities in applied processes for the covered activities in the revised BREF.

#### *Conclusions reached by the TWG for the revised STS BREF*

- A potential structure for the revised BREF was circulated to the TWG with the call for Initial Positions (Document 3).
- The structure of the BREF after revision will need to take account of:
  - The insertion of the WPC sector.
  - Any mergers of STS sectors agreed during the KOM.
  - Any new STS activities included following the information gathering.

### 5.2 BAT conclusions structure

The EIPPCB proposal was to update the current BAT conclusions to fit the standards of the BREF Guidance, to maintain general BAT conclusions for common issues and to include and further develop, where appropriate, sector-specific BAT conclusions (BATC).

#### *Conclusions reached by the TWG for the revised STS BREF*

- BAT conclusions will follow the BREF Guidance (2012/119/EU).

## 6 FORWARD PLANNING FOR THE STS BREF REVIEW AFTER THE KICK-OFF MEETING

The STS TWG agreed at the kick-off meeting on the following forward planning:

BREF review milestones	Tentative timing
Development of sector-specific questionnaires for the data collection	Q1 of 2016
Collection of information and data	Tentatively Q2 of 2016
<b>First draft of the revised BREF</b>	Tentatively Q2 of 2017
Commenting period on the first draft	Tentatively Q3 of 2017
Final TWG meeting	Tentatively Q1 of 2018
Final draft delivered to the IED Article 13 forum meeting	Tentatively Q3 of 2018

The planning of actions/deliverables (based on the agreed tasks for the TWG) for the months after the KoM is as follows:

WHO	WHEN	WHAT
<b>STS: sectors in current BREF</b>		
TWG (ASD)	End 2015	Clarify if coating of aerospace sub-assemblies is best dealt with in Chapter 12 or Chapter 13
AT, BE		Additional information on installations for truck and bus coating
<b>STS: Additional/newly identified activities</b>		
EIPPCB	Already in BATIS	Template for submission of brief process description and completed example
TWG	End of January 2016	Provide brief process descriptions for newly identified activities
EIPPCB	Mid-February 2016	To assess and propose how to deal with identified new activities
TWG	End February 2016	To comment
EIPPCB	End Q1 2016	Upload final conclusions to BATIS
TWG	End January 2016	Provide information on carbonitriding
BE		Provide information on DMF measurements
<b>STS: Applied processes and techniques</b>		
EIPPCB	27/11/2015	STS: Timetable by chapters for information on applied processes and techniques
TWG	11/12/2015	Comment on information availability
EIPPCB	15/12/2015	Revise timetable
TWG	Q1 2016	Provide information
<b>WPC: Applied processes and techniques</b>		
FR		Provide information on biocidal product types PT8 and PT18 and relevant requirements
<b>STS: Key Environmental Issues (KEI)</b>		
EIPPCB	27/11/2015	STS: Template(s)
TWG	End 2015	Data/information on: - CMR, SVHC

WHO	WHEN	WHAT
		- number of installations with thermal waste gas treatment and levels of NO <sub>x</sub> and CO emissions
EIPPCB	29/1/2016	Assess submitted data
TWG	15/2/2016	Comment
AT		To provide information on NO <sub>x</sub> and CO emissions from waste gas abatement systems
<b>STS: Sector-specific Key Environmental Issues (KEI)</b>		
EIPPCB	27/11/2015	STS: Template
TWG	End 2015	Data/information on metal discharges to water by sector related to: <ul style="list-style-type: none"> <li>- Which metals and in which form (total or dissolved)</li> <li>- The processes which are the source of these emissions</li> <li>- If discharged directly or indirectly</li> <li>- Identify/assess specific environmental issues caused by metal emissions</li> <li>- Are techniques available and applied to reduce metal emissions</li> <li>- Sampling type, frequency, analytical methods and data availability</li> </ul>
EIPPCB	29/1/2016	Assess submitted data
TWG	15/2/2016	Comment
<b>WPC: Key Environmental Issues (KEI)</b>		
AT, DE, SE	Before questionnaire development	Provide information on the use and emissions of CMR and SVHC
<b>STS: Techniques to consider in the determination of BAT</b>		
TWG	Q1 2016	STS: Basic information on techniques to consider (corrections to technique titles, update/provide brief description)
TWG	Q2 2016 (target)	Full update/drafting of existing or new techniques (following the 10-heading structure)
TWG:		STS: information promised on techniques
ESVOCCG		- General issues
AT		- Waste gas treatment
ECCA/EURO FER		- Coil coating
ACEA		- Coating of cars, vans and trucks, buses, other metal surfaces, plastic workpieces
EWVG		- Winding wire
<b>WPC: Techniques to consider in the determination of BAT</b>		
EIPPCB	18/12/2015	WPC: Update list of BAT candidates (with the assistance of TWG)
TWG	29/1/2016	Indicate for which techniques (of the updated list) information can be provided
TWG	End of Q1 2016	Provide description for those BAT candidates needing a more detailed description
FR		Information on brief dipping and spraying/spray tunnels
<b>Information and data gathering</b>		
TWG	29/1/2016	Propose installations for the data and information collection