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JOINT RESEARCH CENTRE

Directorate B – Fair and Sustainable Economy
Circular Economy and Sustainable Industry (JRC.B.5)
European Bureau for Research on Industrial Transformation and Emissions (EU-BRITE)

Seville, 13 March 2025
JRC.B.5/EU-BRITE

KICK-OFF MEETING

FOR THE DRAWING UP OF THE

BEST AVAILABLE TECHNIQUES (BAT) REFERENCE DOCUMENT FOR THE EXTRACTION OF ORES INCLUDING ON-SITE TREATMENT OPERATIONS – MINING
(MIN BREF)

Hybrid meeting, 2 – 5 December 2024

MEETING REPORT

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ACRONYMS

General acronyms – Definitions

Acronym/term used	Meaning/definition
BAT	Best Available Techniques (as defined in Article 3(10) of the IED)
BAT-AEL	Emission level associated with the BAT (as defined in Article 3(13) of the IED)
BAT-AEPL	BAT-associated environmental performance level (as defined in Article 3(13a) of the IED)
BATIS	BAT information system, accessible at https://eippcb.jrc.ec.europa.eu/batis/
Benchmarks	'Benchmarks' means the indicative range of environmental performance levels associated with best available techniques, which is to be used as a reference in the EMS (as defined in Article 3(13b) of the IED)
BP	Background Paper
BREF	BAT Reference Document (as defined in Article 3(11) of the IED)
BREF Guidance	Commission Implementing Decision 2012/119/EU laying down rules concerning guidance on the collection of data and on the drawing up of BAT reference documents and on their quality assurance
CBI	Confidential Business Information
CRM	Critical raw materials
D1	First draft
EIPPCB	European IPPC Bureau within Directorate B of the Commission's Joint Research Centre, now called EU-BRITE
ELV	Emission limit value
EMS	Environmental Management System
Environmental performance	The 'environmental performance' means the performance with regard to consumption levels, resource efficiency concerning materials, water and energy resources, the reuse of materials and water, and to waste generation, as defined in Article 3(13aa) of the IED
ET	'Emerging technique' means a novel technique for an industrial activity that, if commercially developed, could provide either a higher general level of protection of human health and the environment or at least the same level of protection of human health and the environment and higher cost savings than existing best available techniques (as defined in Article 3(14) of the IED)
ET-AEPL	'Environmental performance levels associated with emerging techniques' means the range of environmental performance levels, obtained under normal operating conditions, using an emerging technique or a combination of emerging techniques as described in BAT conclusions (as defined in Article 3(49) of the IED)
ET-AEL	'Emission levels associated with emerging techniques' means the range of emission levels obtained under normal operating conditions using an emerging technique or a combination of emerging techniques, as described in BAT conclusions, expressed as an average over a given period of time, under specified reference conditions (as defined in Article 3(48) of the IED)
EU	European Union
EU-BRITE	European Bureau for Research on Industrial Transformation and Emissions (formerly EIPPCB)
IED	Directive 2010/75/EU, as amended by Directive (EU) 2024/1785 of the European Parliament and the European Council of 24 April 2024, on industrial and livestock rearing emissions (integrated pollution prevention and control)
INCITE	European Innovation Centre for Industrial Transformation and Emissions

Acronym/term used	Meaning/definition
IS BREF	Best Available Techniques (BAT) Reference Document for Iron and Steel Production (2013)
KEI	Key environmental issue (for the drawing up of this BREF)
KoM	Kick-off Meeting
LCP BREF	Best Available Techniques (BAT) Reference Document for Large Combustion Plants (2017)
MCP Directive	Directive (EU) 2015/2193 of the European Parliament and of the Council of 25 November 2015 on the limitation of emissions of certain pollutants into the air from medium combustion plants
MS	Member State (of the European Union)
MWEI BREF	BAT Reference Document for the Management of Waste from Extractive Industries [Tailings and Waste-rock in Mining Activities] (2018) in accordance with Directive 2006/21/EC
NFM BREF	Best Available Techniques (BAT) Reference Document for the Non-Ferrous Metals Industries (2017)
NGO	Non-governmental organisation
NOC	Normal operating conditions
OTNOC	Other than normal operating conditions
TWG	Technical Working Group
WWTP	Waste water treatment plant

Chemical symbols

Symbol	Chemical element/metal
Ag	Silver
Al	Aluminium
As	Arsenic
Au	Gold
Co	Cobalt
Cr	Chromium
Cu	Copper
Fe	Iron
H	Hydrogen
Hg	Mercury
Li	Lithium
Mn	Manganese
Ni	Nickel
Pb	Lead
Pd	Palladium
Pt	Platinum
Sb	Antimony
Se	Selenium
Sn	Tin
U	Uranium
W	Tungsten
Zn	Zinc

Substances, groups of substances and parameters

Symbol	Chemical element/metal
CN^-	Free cyanide
CO	Carbon monoxide
CO_2	Carbon dioxide
COD	Chemical oxygen demand
HOI	Hydrocarbon oil index
NO_x	Nitrogen oxides
SO_x	Sulphur oxides
SO_4^{2-}	Sulphates
TN	Total nitrogen
TSS	Total suspended solids
VOC	Volatile organic compound (as defined in Article 3(45) of the IED)

Participants in the Kick-off Meeting

Acronym	Participant	Number of participants in the KoM	
		In Person	Online
	Member States		
AT	Austria	3	
BE	Belgium		3
BG	Bulgaria		1
CZ	Czechia		3
DE	Germany	1	5
ES	Spain	4	5
EL	Greece	1	1
HU	Hungary		1
FI	Finland	2	2
FR	France	4	1
IE	Ireland		2
IT	Italy	1	6
NL	Netherlands	2	
PL	Poland		4
PT	Portugal		6
RO	Romania		1
SE	Sweden	4	3
SK	Slovakia		2
	Other countries		
NO	Norway	2	1
	Environmental non-governmental organisations		
EEB	European Environmental Bureau	1	2
	Industry associations		
CEFIC	European Chemical Industry Council	1	1
EUROFER	European Steel Association	1	5
EUROMETAUX	European Non-ferrous Metals Association		1
EUROMINES	European Association of Mining Industries, Metal Ores & Industrial Minerals	19	17
FuelsEurope	European Petroleum Refiners Association	1	
IMA Europe	Industrial Minerals Association		2
	Other Agency		
ECHA	European Chemicals Agency	3	
	European Commission		
DG ENV	Directorate-General for the Environment	2	4
DG GROW	Directorate-General for Growth		2
JRC – D3	Joint Research Centre – Unit D3	2	
JRC – EU-BRITE	Joint Research Centre – EU-BRITE	16	4

A total of 155 participants attended the meeting (70 in-person and 85 online), representing EU Member States and Norway, industry, an environmental NGO, the European Chemicals Agency (ECHA) and services of the Commission.

1 INTRODUCTION

1.1 Kick-off Meeting for the drawing up of the MIN BREF

The Technical Working Group (TWG) for the drawing up of the Best Available Techniques Reference Document for the extraction of ores including on-site treatment operations – mining held its Kick-off Meeting (KoM), in a hybrid format, from 2 to 5 December 2024.

This new BREF for the extraction of ores including on-site treatment operations – mining (the MIN BREF) will be drawn up to cover the activity specified in point 3.6 of Annex I to Directive 2010/75/EU, as amended by Directive (EU) 2024/1785 (24 April 2024) ([1]), on industrial and livestock rearing emissions (integrated pollution prevention and control) (the IED). The industrial activities are specified in its Annex I, including the activity under point 3.6, as follows:

Extraction including on-site treatment operations, such as comminution, size control, beneficiation and upgrading, of the following ores on an industrial scale:

- *bauxite, chromium, cobalt, copper, gold, iron, lead, lithium, manganese, nickel, palladium, platinum, tin, tungsten and zinc.*

TWGs are set up to facilitate the exchange of information under Article 13(1) of the IED

The drawing up of the MIN BREF started with the activation of the TWG by EU-BRITE on 27 May 2024. Additionally, TWG members were asked to provide their views and information on different aspects via the activation letter including the call for frontloading ([2]), with a deadline for responses of 29 July 2024.

A total of 15 stakeholder groups responded: 10 Member States (AT, ES, FI, FR, DE, BE, IT, PL, SK and SE), NO and two industry associations: Euromines and CEFIC, one environmental NGO (EEB) and ECHA.

Based on these responses, a Background Paper (BP) was prepared by EU-BRITE to assist TWG members in their preparation for the KoM, to create a common basis for the discussion during the meeting and to facilitate the discussion at the KoM. The BP summarises and assesses the views and information provided by the TWG as part of the frontloading exercise and presents EU-BRITE's proposals. The BP identified items for discussion (BP Section 3) and not for discussion at the KoM (BP Section 4).

EU-BRITE uploaded the BP to BATIS on 31 October 2024 and organised the KoM, as a hybrid meeting, from 2 to 5 December 2024.

The meeting agenda included presentations and discussions on, for example, scope, key environmental issues for emissions to air and to water as well as for energy consumption and water management, process chemicals consumption, circular economy and residues generation and management, decarbonisation and CO_2 emissions, emerging techniques and the link with INCITE and other items relevant for the drawing up of the MIN BREF. In response to the reactions and comments on the BP received by 18 November 2024, it was decided to discuss at the KoM additional items that were originally proposed as not for discussion in the BP (see Table 1) as well as new topics/items proposed by TWG members. Those were odour, noise and vibration, NOC/OTNOC, occupational health and safety, confidentiality issues and the structure

([1]) Directive - EU - 2024/1785 - EN - EUR-Lex (europa.eu)

([2]) EU-BRITE Note, Ref. Ares(2024)3790670 – 27/05/2024.

of the MIN BREF as well as physical stability, response to emergency situation, best practices on liability and safety risk issues, biodiversity, geochemical baseline and the possible change of the name of this BREF.

The Head of EU-BRITE and two permanent staff members of EU-BRITE chaired the KoM. The MIN BREF co-authors (i.e. the MIN BREF author team of EU-BRITE) introduced each topic and led the technical discussions. The TWG's conclusion was sought on the following key items: 1) scope of the MIN BREF and interface with other BREFs, 2) key environmental issues including circular economy, decarbonisation and CO_2 emissions, 3) emerging techniques (ET) and the link with INCITE, and 4) confidentiality issues associated with the data collection and next steps for the drawing up of the MIN BREF.

All items were discussed in a similar manner. First, for each issue/topic a proposal was presented by EU-BRITE. This was followed by a presentation of EU-BRITE's assessment of the relevant frontloading information, which formed the basis for the EU-BRITE proposal. In addition, brief summaries of related specific frontloading information and views were provided. TWG members then had the opportunity to discuss the proposal, and reach a conclusion by consensus.

All frontloading responses received are available in the following BATIS folders: BATIS > Forum > MIN BREF> 02 Views and frontloading > 01 Views and/or BATIS > Forum > MIN BREF> 02 Views and frontloading > 02 Frontloading.

Table 1: Agenda of the MIN TWG KoM

Item	BP Section(s)
Day 1: 2 December 2024	
Introduction to the meeting: welcome, meetings rules	—
Introductory presentation DG ENV IED	—
Introductory presentation EU-BRITE - The Sevilla process	—
Introductory presentation EU-BRITE - Overview of the work - Structure of the meeting	—
Scope – Mining activities	3.1.1
Scope – Mining operations	3.1.2
Scope – Interface with other BREFs and the MCP Directive	3.1.4
Scope – Independently operated WWTP and combined treatment of waste water	3.1.3
Additional items requested for discussion (by TWG members)	—
Management of land and soil quality (DE) *Planning and financing reclamation and closure (DE)* *(as part of mining operations)*	*3.1.2*
Day 2: 3 December 2024	
Presentation of the day agenda	—
KEI – Emissions to air – Channelled emissions from mining operations	3.2.3.1
KEI – Emissions to air – Exhaust emissions from engines	3.2.3.2
KEI – Emissions to air – Diffuse emissions	3.2.3.3
KEI – Emissions to water - General + Waste water characteristics	3.2.4.1/2
KEI – Emissions to water – COD + TOC + TSS	3.2.4.3/4
KEI – Emissions to water - Metal emissions	3.2.4.5
KEI - Emissions to water – Total Nitrogen (TN) + Phosphate and sulphate and thiosalts	3.2.4.7/8/9
KEI – Emissions to water – Cyanide + HOI	3.2.4.6/10

Item	BP Section(s)
KEI – Process chemicals consumption	3.2.5
Additional items requested for discussion (by TWG members)	—
To consider the addition of respirable crystalline silica dust and, where appropriate, fibrous silicates (IT). To add 'explosives' (EEB) *(as part of channelled emissions and/or diffuse emissions; exhaust emissions from engines)*	*3.2.3.1/2/3*
To introduce redox potential as a KEI (FR) *(as part of waste water characteristics)*	*3.2.4.2*
To introduce xanthates (FI, EEB) *(as part of emissions to water)*	*3.2.4*
Day 3: 4 December 2024	
Presentation of the day agenda	—
KEI – Energy consumption	3.2.6
KEI – Consumption of water and amount of water discharged	3.2.7
KEI – Circular economy - Residues generation and management	3.2.8
KEI – Decarbonisation and CO_2 emissions	3.2.9
Information and data collection – 1) Expression of BAT-AELs for emissions to air and water	3.4.1
Information and data collection – 2) Averaging periods for BAT-AELs to emissions to air	3.4.1.1
Information and data collection – 3) Averaging periods for BAT-AELs to emissions to water	3.4.1.2
Information and data collection – 4) Expression of BAT-AE(P)Ls	3.4.2
Emerging techniques (ET) and link to INCITE	3.3
Report back from the subgroup established on Day 1	3.5
Additional items requested for discussion	
Odour (AT, SE, CEFIC, IT)	*4.1*
Noise and vibration (SE)	*4.2*
Normal operating conditions and other than normal operating conditions (CEFIC)	*4.5*
Occupational health and safety (EEB)	*4.4*
Confidentiality issues (EEB, CEFIC)	*4.6*
Structure of the MIN BREF (AT, FI, IMA, IT)	*4.7*
New topics requested for discussion	
Physical stability/response to emergency situations/best practices on liability and safety risk issues (DE/EEB)	*new*
Biodiversity (DE,EEB)	*new*
Geochemical baseline (IT)	*new*
Change of the name of the MIN BREF (EUROMINES, IMA)	*new*
Day 4: 5 December 2024	
Presentation of the day agenda	—
Next steps (tentative timeline) and site visits	—
Introduction to BATIS	—
Summary of preliminary draft conclusions of the meeting	—
Feedback on preliminary draft conclusions of the meeting	—
Closure of the meeting	—

This document summarises the discussion at the KoM and presents all conclusions reached by the TWG. It does not list or repeat all interventions but instead provides a synthetic overview of the arguments put forward by TWG members in order to conclude on the proposals made by EU-BRITE.

The following sections (3 – 18) first present EU-BRITE's proposal, then a summary of the discussion, and finally the conclusions reached by the TWG. For transparency, all conclusions that were formally adopted by the TWG are shown in grey boxes. For the sake of brevity, the presentation of the EU-BRITE proposal is omitted where it is similar to the final conclusions, whether or not it was discussed at the KoM.

All presentations given and conclusions reached at the KoM are available to TWG members in the following BATIS folder: BATIS > Forum > MIN BREF> 03Kick-off meeting > 04 Presentations.

As of 13 March 2025, the TWG consists of 205 members representing EU Member States and Norway, industry associations, an environmental NGO, the European Commission as well as the European Chemicals Agency (ECHA).

2 INTRODUCTORY PRESENTATIONS

The Head of EU-BRITE opened the KoM and welcomed the TWG members. Following a short presentation on meeting rules, a representative of the Directorate-General for Environment of the European Commission (DG ENV) gave a presentation first introducing the legal context and framework considering the adoption of the revised IED in July 2024. The presentation recalled the importance of BAT conclusions as the key outcome of the process. More specifically, it highlighted the addition of the mining activity within the IED scope, this sector being key to the European Green Deal and EU industrial policy.

EU-BRITE gave a general introduction to the *Sevilla process* for drawing up and reviewing BREFs. The presentation highlighted the approach to derive BAT, as well as BAT-associated emission levels (BAT-AELs) and BAT-associated environmental performance levels (BAT-AEPLs), which is a pragmatic and iterative process involving the whole TWG. In this process, EU-BRITE's responsibility is to make concrete proposals on BAT, BAT-AELs and BAT-AEPLs to the whole TWG based on the information collected, especially based on the data collected through questionnaires. The TWG is invited to comment on these proposals and to submit any evidence supporting alternative proposals. Decisions on BAT (including on BAT-AELs and BAT AEPLs and/or benchmarks) as well as ET (including ET-AELs and ET-AEPLs) are taken by consensus by the whole TWG at the Final Meeting.

In addition, EU-BRITE recalled the meeting rules for both in-person participants and online attendees of this hybrid meeting and explained the general format of the KoM and the organisation of the discussion. It was recalled that the duration of the exchange of information should not exceed 4 years, in line with the IED.

The work of the MIN TWG will follow the BREF Guidance for the exchange of information under the IED as stated in Commission Implementing Decision 2012/119/EU. It should be noted that the BREF Guidance ([3]), following the revision of the IED, is currently under revision.

([3]) Commission Implementing Decision 2012/119/EU

3 SCOPE OF THE MIN BREF

3.1 Mining activities

In BP Section 3.1.1, EU-BRITE proposed the following:

To include in the scope of the MIN BREF:

- The activity listed in point 3.6 of Annex I to the IED: Extraction including on-site treatment operations, such as comminution, size control, beneficiation and upgrading, of the following ores on an industrial scale bauxite, chromium, cobalt, copper, gold, iron, lead, lithium, manganese, nickel, palladium, platinum, tin, tungsten and zinc.
- The co-extraction of ores when one of the ores is listed under point 3.6 of Annex I to the IED.
- The on-site processing of extractive residues (e.g. tailings) as a directly associated activity.

Not to include in the scope of the MIN BREF:

- The extraction of geothermal lithium.
- Small-scale 'artisanal' operations.

The discussion started with the activities that should be included in the scope of the BREF, followed by the activities that should NOT be included in the scope of the BREF.

Some TWG members proposed clarifications and amendments of the terms "ore", "metalliferous ore", "material", "industrial mineral".

There was consensus within the TWG not to include in the scope the 'extraction of geothermal lithium' since the extracted material is not an ore and therefore is not under point 3.6 of Annex I to the IED.

It should be noted that the environmental NGO disagreed with the exclusion of the extraction of metals from geothermal brines from the scope of the MIN BREF.

At the end of the discussion, the consensus reached was as follows.

Conclusions reached by the TWG:

To include in the scope of the MIN BREF:

- The activity listed in point 3.6 of Annex I to the IED.
- The co-extraction, including on-site treatment operations, at industrial scale, of metalliferous ores associated with the activity listed under point 3.6 of Annex I to the IED.
- The extraction and on-site treatment of extractive residues (e.g. tailings, waste rock) for the purpose of production of concentrates of the metals listed under point 3.6 of Annex I to the IED.

Not to include in the scope of the MIN BREF the stand-alone treatment of extractive residues (e.g. tailings, waste rock) when the main purpose is not the production of concentrates of the metals listed under point 3.6 of Annex I to the IED.

Not to include in the scope of the MIN BREF:

- The extraction of metals from geothermal brines (e.g. lithium).
- Small-scale 'artisanal' operations.

To add in the kick-off meeting report that EEB disagrees with the exclusion of the extraction of metals from geothermal brines from the scope of the MIN BREF.

3.2 Mining operations

In BP Section 3.1.2., EU-BRITE proposed the following:

To cover in the MIN BREF the following operations:

- open-pit and underground ore extraction;
- extraction of ores, e.g. using drilling, blasting, mechanical excavation;
- comminution of ores, e.g. crushing and grinding to reduce size;
- size control of ores, e.g. screening, mineral sorting, and classification;
- beneficiation of ores, e.g. separating minerals through physical, chemical or biological means;
- upgrading of ores, e.g. further concentrating and refining the ore through processes such as sedimentation, drying, dewatering, filtration, flotation, magnetic separation;
- relevant site remediation operations (excluding extractive waste management facilities);
- transport and handling of materials (loading, hauling, unloading).

Not to cover in the MIN BREF the exploration and prospective phase prior to ore extraction.

TWG members voiced specific comments related to clarifications and amendments of wording within the proposal text.

There were many clarifications provided by TWG members to better define the mining operations to be included in the scope. It was highlighted that directly associated activities should be covered by the scope.

The on-site processing of gold ore using cyanide-based leaching was intensively discussed. One MS (FR) disagreed with the inclusion of this issue in the scope of the MIN BREF and pointed out that it is already dealt with in the NFM BREF. This was supported by another MS and several industrial associations. Other TWG members (MS and the environmental NGO) were in favour of including it within the scope.

The issue on the remediation step was discussed in detail. As the TWG could not reach a consensus, it was decided to establish an ad-hoc subgroup (as per the BREF Guidance) to further define the remediation steps and eventually reach a consensus on which steps should be included in the scope of the MIN BREF. The subgroup was co-led by EUROMINES and other TWG members were invited to join the subgroup.

On the third day of the KoM, the ad-hoc subgroup presented its work, which primarily consisted of definitions related to the various remediation steps. A 'Closure and post-closure glossary' was presented and discussed, which can also be found in the following BATIS folder: BATIS > Forum > MIN BREF > 03Kick-off meeting > 04Presentations > 11Glossary Document. However, no consensus was reached as to the remediation steps to be included in the scope of the MIN BREF. As a result, it was agreed to establish a subgroup that would continue working beyond the KoM, to further discuss the topic and propose remediation steps for consideration by the TWG (see also Section 19.1).

At the end of the discussion, the consensus reached was as follows.

Conclusions reached by the TWG:

- To cover in the MIN BREF the following operations in open-pit and underground ore extraction:
  - extraction of ores, e.g. using drilling, blasting, mechanical excavation;
  - comminution of ores, e.g. crushing and grinding to reduce size;
  - size control of ores, e.g. screening, mineral sorting, and classification;
  - beneficiation of ores, e.g. separating minerals through physical, chemical or biological means; this includes chemical leaching and/or bioleaching;
  - upgrading of ores, e.g. further concentrating the ore through processes such as sedimentation, drying, dewatering, filtration, flotation, magnetic separation;
  - on-site preparation of filling materials (e.g. for ramps and galleries);
  - construction of ramps and galleries during the extraction phase.
- France disagrees with the inclusion of the treatment of gold ore by using a cyanide-based leaching process in the scope of the MIN BREF.
- To cover in the MIN BREF the following operations:
  - On-site transport and handling of materials (loading, hauling, unloading).
- To collect information on relevant site remediation measures.
- The TWG to decide at a later stage, based on the information collected, which remediation steps will be covered by the MIN BREF. To inform the TWG decision, a TWG subgroup will be established to work on the preparation of a proposal to the TWG for the remediation steps to be covered. EU-BRITE will make available on BATIS the mandate of the TWG subgroup shortly after the KoM.
- Not to cover in the MIN BREF the exploration and prospective phase prior to ore extraction.

3.3 Interface with other BREFs and the MCP Directive

In BP Section 3.1.4., EU-BRITE proposed the following:

- To collect information on combustion processes taking place in the mining activity and their characteristics, for example rated thermal input, use of generated heat (e.g. direct or indirect heating or drying).
- Not to cover sintering and pelletisation processes as these are covered in the IS BREF.
- Not to cover the production of doré gold as it is covered in the NFM BREF.
- Not to duplicate in the MIN BREF information already covered in the MWEI BREF, instead cross-referencing to that document where applicable.

The interface with other BREFs was extensively discussed during the KoM. The discussion was on IED BREFs and the Management of Waste from Extractive Industries BREF, which was developed under a different piece of legislation (Directive 2006/21/EC). Various TWG members, such as Member States and industry associations, shared a general point of concern about double regulation. EU-BRITE pointed out that double regulation should be avoided.

During the meeting, participants expressed differing opinions on the interface with other IED BREFs such as NFM or IS.

EU-BRITE reminded the TWG participants of a basic principle of the Sevilla process, i.e. that one BREF's TWG should not provide any recommendations to other BREFs' TWGs.

At the end of the discussion, the consensus reached was as follows.

Conclusions reached by the TWG:

- To collect information on combustion processes taking place on site and their characteristics, for example rated thermal input, use of generated heat (e.g. direct or indirect heating or drying).
- Not to duplicate in the MIN BREF information already covered in the LCP BREF and in the MCPD, but to instead cross-reference these documents where applicable.
- Avoid overlaps with the scope of other IED BREFs.
- Not to cover sintering and pelletisation processes as these are covered in the IS and NFM BREFs.
- Not to cover the production of doré gold as it is covered in the NFM BREF.
- Not to duplicate in the MIN BREF information already covered in the MWEI BREF, but instead cross-reference to that document where applicable.

3.4 Independently operated WWTP and combined treatment of waste water

In BP Section 3.1.3., EU-BRITE proposed the following:

- To include in the scope of the MIN BREF the activity in point 6.11 of Annex I to the IED (Independently operated treatment of waste water not covered by Directive 91/271/EEC) provided that the main pollutant load originates from activities in point 3.6 of Annex I to the IED.
- To also include in the scope the combined treatment of waste water from different origins if the main pollutant load originates from the activity covered in point 3.6 of Annex I to the IED and the WWTP is not covered by Directive 91/271/EEC.

The TWG agreed on both proposals. During the discussion, one MS asked for further clarification of the term "independent". One industry association wanted to know what is meant by 'main pollution load'. EU-BRITE reminded the TWG that this aspect will be further clarified specifically in the data collection phase. It was pointed out that this proposal was standard text in all other BREFs.

EU-BRITE proposals were confirmed without changes.

Conclusions reached by the TWG:

- To include in the scope of the MIN BREF the activity in point 6.11 of Annex I to the IED (Independently operated treatment of waste water not covered by Directive 91/271/EEC) provided that the main pollutant load originates from activities in point 3.6 of Annex I to the IED.
- To also include in the scope the combined treatment of waste water from different origins if the main pollutant load originates from the activity covered in point 3.6 of Annex I to the IED and the WWTP is not covered by Directive 91/271/EEC.

4 EMISSIONS TO AIR AND WATER

4.1 Overview

A large part of the KoM was dedicated to discussing and agreeing upon the key environmental issues (KEIs) to be addressed in the drawing up of the MIN BREF and the related substances/groups of substances/parameters as well as process chemicals to be included in the data collection via questionnaires.

It was also discussed in detail whether data on pollutants emitted to air and to water should be collected with the aim of deriving BAT-associated emission levels (BAT-AELs) or with the aim of providing the TWG with evidence to decide at a later stage, based on the data collected, whether BAT-AELs should be derived. This section addresses emissions to air and to water. Parameters related to the consumption of energy, water, raw materials and process chemicals as well as to waste water discharge/water management and residues generation and management (circular economy) are addressed in Section 5.

There are three types of emissions to air considered:

1. Channelled emissions to air from mining operations (dust, SO_X, NO_X).
2. Exhaust emissions from engines (NO_X, VOC and CO).
3. Diffuse dust emissions to air.

Unless specified otherwise, for substances/groups of substances/parameters and/or process chemicals that are not proposed as KEIs, 'bulk information' on associated techniques can be collected by the TWG and may be considered for drawing up the MIN BREF.

Substances/groups of substances/parameters and/or process chemicals, which might potentially be relevant when considering emissions to air and to water from mining installations, were included as KEIs and were assessed by EU-BRITE based on the frontloading information provided by TWG members and on available scientific and technical information.

During the questionnaire development, emphasis will be given to the clarification of which chemicals are included in the emission data to be reported in order to ensure the comparability of the collected data. To address this, it was decided during the KoM to establish a dedicated TWG subgroup to review the list of chemicals provided by ECHA (see also Sections 5.1 and 19.1).

This document does not aim to report the detailed discussions at the KoM for each and every substance/group of substances/parameters. Instead, it focuses on the most important points.

4.2 Emissions to air

Following the proposals in BP Section 3.2.3 and the discussions that took place during the KoM for the different types of emissions to air and for each substance/group of substances/parameters, the TWG concluded on revised proposals to accommodate the comments raised. The KoM conclusions are the following, presented in Table 2 below.

- Some TWG members noted the significance of emissions from underground mining through ventilation shafts and added that data would be available. However, some TWG members pointed out that emissions through ventilation shafts are not always

monitored. The availability of appropriate techniques for shaft ventilation, including monitoring techniques, has to be checked and considered. It was pointed out that there are tools like the questionnaire to deal with different and relevant data sources. The importance of dust, SO_X and NO_X emissions was highlighted by the information provided during the frontloading phase. It was suggested that the discussion should focus on how to prevent dust in the environment. The environmental improvements should be linked to improvements for human health.

- When discussing exhaust emissions from engines, it was mentioned that the collection of data would be useful and data could be collected for fuel consumption and associated emissions.
- It was pointed out that it is possible to measure diffuse dust emissions. The relevance of diffuse dust emissions for individual mining operations needs to be assessed. TWG members emphasised that there may be difficulties in measuring and/or identifying the specific mining operation to which the specific part of the channelled dust emission belongs.
- Additionally, data could be collected on monitoring practices that are in place.

At the end of the discussion, the consensus shown in Table 2 was reached.

Table 2: KoM conclusions on discussions regarding KEIs for emissions to air

Emission to air/ substances/parameters	KoM conclusion
Channelled emissions to air from mining operations/ Dust, SO_X, NO_X	• To include dust (including metals), SO_X and NO_X emissions as KEIs for channelled emissions to air. • The TWG to decide at a later stage, during the questionnaire development, for which mining operations data on dust (including metals), SO_X and NO_X should be collected. • The TWG to decide at a later stage, based on the data collected through the questionnaires, whether BAT-AELs should be derived. • To collect information on techniques/measures to prevent and/or to reduce dust (including metals), SO_X and NO_X emissions to air from relevant mining operations covered by the scope of the MIN BREF.
Exhaust emissions from engines/ NO_X, VOC and CO	• To collect data and information on NO_X, VOC and CO emissions from engines associated with the equipment used in relevant mining operations (e.g. drilling, hauling, transfer and handling of materials) covered by the scope of the MIN BREF. • To collect information on alternative types of equipment/machinery (e.g. powered by electric motors) associated with relevant mining operations.
Diffuse dust emissions to air	• To include diffuse dust emissions to air as a KEI for emissions to air. • To collect data and information on diffuse dust emissions for the relevant mining operations covered by the scope of the MIN BREF. • To collect information on the techniques used to prevent/reduce diffuse dust emissions and their performance. • To collect information on the on-site monitoring of dust concentration/load in ambient air.

4.3 Emissions to water

Following the proposals in BP Sections 3.2.4.1 to 3.2.4.10 and the discussions that took place during the KoM for emissions to water, the conclusions on the KEIs for emissions to water are presented in Table 3 and Table 4 below.

During the KoM, discussions took place on:

- general considerations and parameters for the waste water characteristics;
- substances/parameters to be included as KEIs;
- the appropriateness of including cyanide as a KEI.

The elements discussed are summarised below:

- A preliminary exchange of technical views on the potential types/sources of emissions to water from the mining processes took place. The discussion covered collecting information on overall water management, from different mine sites, as well as including protection of groundwater and soil. The option to include emissions to surface water and ground water was discussed. A concern was shared as to whether it would be possible to collect data on ground water emissions.
- It was recommended to collect information about techniques applied to reduce emissions to water. It was also suggested to include overall water management, meaning from different mine sites and including water management from mining operation and after closing. It was decided to discuss the issues in the remediation subgroup (see Sections 3.2 and 19.1).
- An exchange of views regarding different waste water characteristics to be covered for the data collection took place. It was considered relevant to add the redox potential to the list of waste water characteristics (see Table 3).
- Considering pH as a KEI (and not as a waste water characteristic) was suggested and agreed on (see Table 4).
- It was suggested and agreed on to add 'Dissolved organic carbon (DOC)' to the list of substances/parameters. A discussion took place on whether DOC should be included as a KEI.
- After discussion, it was seen as relevant to add nitrates and ammonium to the list of substances/parameters as well as total phosphorus (TP) and xanthates.
- Additionally, a discussion on the inclusion of turbidity took place and it was indicated that it should be decided during the phase of questionnaire development whether data on turbidity should be collected as contextual information.
- The list of metals/metalloids to be considered as KEIs was discussed and it was considered relevant to add Hg, Sb and Se. Furthermore, it was indicated that it might be an open list and subject to the questionnaire development.
- Since metals/metalloids occur naturally in water in most cases, concerns were raised about metals/metalloids as emissions to water.
- It was also indicated that the natural and pre-existing background levels of various elements and substances should be taken into account to ensure that environmental assessments reflect actual contributions from industrial or mining activities rather than naturally occurring conditions, at least as contextual information, if available. One MS informed that in Finland information on background levels is available.
  During the meeting, participants shared differing opinions as to whether cyanide use for gold mining activities should be considered a KEI in the MIN BREF. As no consensus could be reached about these questions, it was decided to collect data on cyanide use and its emissions to water for gold mining activities covered by the MIN BREF. Overlaps with the scope of other IED BREFs should be avoided (see conclusions Section 3.3). Based on these data, the TWG will decide at a later stage whether cyanide emissions to water should be considered as a KEI. The environmental NGO highlighted that the NFM BREF did not determine BAT-AELs for cyanide and/or for free cyanide.
  Industry representatives (CEFIC, Fuels Europe, EUROFER, EUROMETAUX, EUROMINES) and one MS (FR) voiced their concerns on including gold leaching and

its associated impacts, i.e. cyanide emissions to water, arguing that it was already addressed by the NFM BREF. Industry representatives (CEFIC, Fuels Europe, EUROFER, EUROMETAUX, EUROMINES) disagreed with the conclusion to collect data on cyanide use and emissions to water in gold mining activities covered under the MIN BREF. However, other Member States and the environmental NGO pointed out that the NFM BREF lacks BAT-AELs specifically related to cyanide. Furthermore, the environmental NGO stressed that the TWG should focus on banning or substituting cyanides and to collect information on possible substitution options involving less hazardous chemicals.

As a result of the discussion, the consensus shown in Table 3 and Table 4 was reached.

Table 3: KoM conclusions on discussions regarding emissions to water – general and waste water characteristics

Consideration/Parameters	KoM conclusion
General	To collect contextual information, such as the source of emissions to water, the type of treatment (dedicated or combined), the type of discharge and the applied treatment techniques.
Waste water characteristics	To collect information through site-specific questionnaires on the waste water characteristics, i.e. flow, temperature, conductivity and redox potential.

Table 4: KoM conclusions on discussions regarding emissions to water – substances/groups of substances/parameters

Substance(s)/parameters	KoM conclusion
Chemical oxygen demand (COD)	• To include COD, TOC, DOC, TSS and pH as KEIs for emissions to water and to collect data through site-specific questionnaires. The TWG to decide at a later stage, based on the data collected through the questionnaires, whether BAT-AELs should be derived. • The TWG to decide, during the phase of questionnaire development, whether data on turbidity should be collected as contextual information.
Total organic carbon (TOC)	
Dissolved organic carbon (DOC)	
Total suspended solids (TSS)	
pH	
Metals/metalloids	• To include metals/metalloids (e.g. Ag, Al, As, Cd, Cr, Co, Cu, Fe, Hg, Pb, Li, Mn, Ni, Pd, Sb, Se, Sn, U, W, Zn) as KEIs for emissions to water and to collect data through questionnaires. • The TWG to identify the relevant list of metals/metalloids during the questionnaire development phase. The TWG to collect information on natural background levels as contextual information. • The TWG to collect information on the applied waste water treatment techniques and their abatement efficiency. • The TWG to decide at a later stage, based on the data collected through the questionnaires, whether BAT-AELs should be derived.
Total nitrogen (TN)	• To include total nitrogen (TN), as well as nitrates and ammonium as KEIs for emissions to water. To collect data on TN, nitrates and ammonium emissions to water through site-specific questionnaires. The TWG to decide at a later stage, based on the data collected through the questionnaires, whether BAT-AELs should be derived.
Nitrates	
Ammonium	
Total phosphorus (TP)	• To include TP and phosphates as a KEI for emissions to water. To collect data and information on TP and phosphates emissions to water through questionnaires. The TWG to decide at a later stage,
Phosphates	

Substance(s)/parameters	KoM conclusion
	based on the data collected through the questionnaires, whether BAT-AELs should be derived.
Sulphates	• To include sulphates (SO_4^{2-}) and thiosalts as KEIs for emissions to water and to collect data and information through questionnaires. The TWG to decide at a later stage, based on the data collected through the questionnaires, whether BAT-AELs should be derived.
Thiosalts	
Cyanide	• The TWG to collect data on cyanide (free cyanide, expressed as CN-) use and emissions to water in gold mining activities covered under the MIN BREF, through questionnaires. The TWG to decide at a later stage, based on the data collected through the questionnaires, whether cyanide emissions to water should be considered as a KEI. • To add in the KoM report that FR, CEFIC, Eurofer, Eurometaux, Euromines and Fuels Europe disagree with the conclusion to collect data on cyanide use and emissions to water in gold mining activities covered under the MIN BREF, and to decide at a later stage whether cyanide emissions to water should be considered as a KEI. France disagrees to include the leaching of gold in the data collection and as a potential KEI in treatment of gold.
Hydrocarbon oil index (HOI)	• To include hydrocarbon oil index (HOI) as a KEI for emissions to water and to collect data through questionnaires. The TWG to decide at a later stage, based on the data collected through the questionnaires, whether BAT-AELs should be derived.
Xanthates	• To include xanthates as a KEI for emissions to water and to collect data through questionnaires. The TWG to decide at a later stage, based on the data collected through the questionnaires, whether BAT-AELs should be derived.

5 CONSUMPTION, ENERGY EFFICIENCY, WATER MANAGEMENT, CIRCULAR ECONOMY, DECARBONISATION

5.1 Process chemicals consumption

In BP Section 3.2.5, EU-BRITE proposed the following:

- To include the consumption of process chemicals (e.g. reagents, chemical agents and explosives) as a KEI.
- To collect data and information on mining operations that involve the use of process chemicals for the different types of ores extracted and treated through site-specific questionnaires.
- The TWG to review the list of substances provided by ECHA (available on BATIS) in order to identify the relevant process chemicals used in the mining operations under the scope of the MIN BREF.
- To collect data and information on the type and quantity of process chemicals used in mining operations under the scope of the MIN BREF.
- To collect data and information on the recovery and reuse of process chemicals in mining operations.
- To collect information on chemicals management systems (including chemicals inventories) applied.
- To collect data and information on the mining operations using sodium cyanide and on the possible substitution options involving alternative less hazardous chemicals.

The proposal was discussed in detail by the TWG. ECHA provided a list of chemicals, noting that it may not include all relevant substances. TWG members pointed out the need to narrow down the current list of hazardous substances, with a focus on severe and moderate aquatic hazards. ECHA explained that no substances of very high concern were identified, and there were no relevant existing restrictions. Additionally, there is a need for a clear methodology to filter the list of chemicals.

TWG members pointed out that a chemical inventory would be helpful in sorting out the types of chemicals that are being used. Considering the time and challenges involved in replacing hazardous substances with less hazardous alternatives was also emphasised.

It was proposed to establish a TWG subgroup to work on the chemicals list. TWG members agreed and it was decided to establish a TWG subgroup to review the list of substances provided by ECHA (available on BATIS: BATIS > Forum > MIN BREF> 02 Views and frontloading > 02 Frontloading) in order to identify the relevant process chemicals used in the mining operations under the scope of the MIN BREF and the chemicals (e.g. reagents, chemical agents and explosives) to be included as KEIs. Furthermore, the TWG agreed to conclude on this matter based on the outcome of the subgroup work, prior to the data collection phase via questionnaires.

At the end of the discussion, the consensus reached was as follows.

Conclusions reached by the TWG:

- To establish a TWG subgroup to review the list of substances provided by ECHA (available on BATIS) in order to identify the relevant process chemicals used in the mining operations

under the scope of the MIN BREF and the chemicals (e.g. reagents, chemical agents and explosives) to be included as KEIs.
- The TWG to conclude on this matter based on the outcome of the TWG subgroup work, prior to the data collection phase through questionnaires.
- To collect data and information on mining operations that involve the use of process chemicals for the different types of ores extracted and treated through questionnaires.
- To collect data and information on the type, and quantity, purpose, function and fate of process chemicals used in mining operations under the scope of the MIN BREF.
- To collect data and information on the recovery and reuse of process chemicals in mining operations.
- To collect information on the chemical inventories applied.
- To collect data and information on possible substitution options involving alternative non- or less hazardous chemicals.

5.2 Energy consumption

In BP Section 3.2.6, EU-BRITE proposed the following:

- To include specific energy consumption (e.g. energy consumed per quantity of ore extracted/processed) as a KEI.
- To collect data on specific energy consumption in mining operations (e.g. extraction, comminution, size control, beneficiation and upgrading) including operation steps under the scope of the MIN BREF, through questionnaires.
- The TWG to identify the contextual information needed to understand and compare the energy consumption data collected through the questionnaires. Contextual information includes type of energy used (including fuel types), monitoring methods and calculations, mine configuration and defined boundaries, size and depth of the mine, ore characteristics (soft or hard), ore distribution, temperature of the rock and hydrogeology.
- To collect information on techniques/measures applied to increase energy efficiency.
- The TWG to decide at a later stage, based on the data collected through the questionnaires, whether BAT-AEPLs and/or benchmarks on the specific consumption of energy should be derived.

In general, the TWG supported EU-BRITE's proposal. The TWG reactions focused on avoiding double regulation, on how the data could be collected, the term 'on-site' and confidential business information (CBI data).

Concerns were shared as to why energy consumption is considered a KEI. Reference was made to Article 11 (f) of the IED which mentions energy efficiency, which is considered to be one of the general principles governing the basic obligations of the operator. Concerns were raised about double regulation with, for example, energy efficiency regulations and energy audits that have to be carried out every year. EU-BRITE clarified that double regulation should be avoided.

Furthermore, concerns were raised on how data on energy consumption will be collected and whether data are comparable between installations. It was pointed out that this will be addressed during the questionnaire development phase.

It was highlighted by EU-BRITE that energy consumption/energy efficiency is an environmental issue, which is part of many BREFs. Mining activities consume notable amounts of energy.

It was suggested to differentiate by type of energy used and to include energy data resulting from renewable energy sources.

At the end of the discussion, the consensus reached was as follows.

Conclusions reached by the TWG:

- To include specific energy consumption (e.g. energy consumed per quantity of ore extracted/processed) as a KEI.
- To collect data on specific energy consumption in mine operations (e.g. extraction, comminution, size control, beneficiation and upgrading) including operation steps under the scope of the MIN BREF, through questionnaires.
- The TWG to identify the contextual information needed to understand and compare the energy consumption data collected through the questionnaires. Contextual information includes: type of energy used/produced (including fuel types) in the installation, monitoring methods and calculations, mine configuration and defined boundaries, size and depth of the mine, ore characteristics (soft or hard), ore distribution, temperature of the rock and hydrogeology.
- To collect information on techniques/measures applied to increase energy efficiency as well as on the use and production of renewable energy in the installation.
- The TWG to decide at a later stage, based on the data collected through the questionnaires, whether BAT-AEPLs and/or benchmarks on the specific consumption of energy should be derived.

5.3 Water management

In BP Section 3.2.5, EU-BRITE proposed the following:

- To include water consumption and waste water discharge as KEIs.
- To collect data on specific water consumption and specific waste water discharge in mine operations (e.g. extraction, comminution, size control, beneficiation and upgrading) at site and process level if available, through site/plant-specific questionnaires.
- The TWG to identify the contextual information needed to understand and compare the specific water consumption and waste water discharge data collected through the questionnaires. Contextual information includes applied techniques, mining operations, methods used for monitoring and calculation, water reuse, water recycling rate, site configuration and defined boundaries, level of data aggregation.
- To collect information on techniques/measures applied to reduce water consumption and waste water discharge.
- To collect information on water management systems applied in mining operations for collecting contaminated water and non-contaminated surface run-off water and for intake of water from watercourses.
- The TWG to decide at a later stage, based on the data collected through the questionnaires, whether BAT-AEPLs and/or benchmarks on the water consumption and waste water discharge should be derived.

One MS proposed to change the heading to ‘Water management’ in order to cover diffuse water emissions.

It was suggested by the TWG to collect information on the water management techniques applied for surface and underground water flows, water collection and discharge, etc., and also related to cooling water but not to consider sanitary water.

Concerns were raised about how diffuse water emissions will be monitored.

During the discussion, concerns were shared regarding the development of BAT-AEPLs and/or benchmarks by several MS, the EEB and industry representatives.

For clarification, DG ENV explained that the revised IED places more emphasis on environmental performance (including consumption, efficiency and reuse of materials, water, energy and waste). The way to set environmental performance ranges, limits and/or levels in the permits based on the BAT-AEPLs is laid down in Article 15(4) of the IED. For water consumption, BAT-AEPLs and/or benchmarks could be derived. The rationale and circumstances to define either BAT-AEPLs or benchmarks in the BAT conclusions is set out in Recital 27 of the revised IED.

TWG members also emphasised that it remains to be seen what type of data will be obtained in the data collection.

At the end of the discussion, the proposal was revised and the consensus reached was as follows.

Conclusions reached by the TWG:

- To include water consumption and waste water discharge as KEIs.
- To collect data on specific water consumption and specific waste water discharge in mine operations (e.g. extraction, comminution, size control, beneficiation and upgrading) at site, installation and process level if available, through questionnaires.
- The TWG to identify the contextual information needed to understand and compare the specific water consumption and waste water discharge data collected through the questionnaires. Contextual information includes applied techniques, mining operations, methods used for monitoring and calculation, water reuse, water recycling rate, site configuration and defined boundaries, level of data aggregation.
- To collect information on techniques/measures applied to reduce water consumption and waste water discharge.
- To collect information on the water management techniques applied in the site on water intake, surface and underground water flows, water collection and discharge, etc.
- To collect information on applied measures/techniques to prevent or minimise diffuse emissions to soil and groundwater.
- The TWG to decide at a later stage, based on the data collected through the questionnaires, whether BAT-AEPLs and/or benchmarks on the water consumption and waste water discharge should be derived.

5.4 Circular economy – Residues generation and management

In BP Section 3.2.8, EU-BRITE proposed the following:

- To include the generation of residues as a KEI.
- To collect data and contextual information on residue types (e.g. tailings, waste rock) generated in mining operations (e.g. extraction, comminution, size control, beneficiation and upgrading), specific quantities, waste generation prevention measures and waste management (e.g. reuse, recovery, recycling and/or disposal). The TWG to decide at a later stage, based on the data collected through the questionnaires, whether BAT-AEPLs should be derived.
- To collect information on techniques to promote circular economy.

The environmental NGO proposed to add the recovery of residues. One MS drew the attention of the TWG to the waste management plans (according to Article 5 of Directive 2006/21/EC) as a source of information that could be included in the information collection. It was also discussed and decided to add to the proposal ‘benchmarks’ in addition to ‘performance levels (BAT-AE(P)Ls)’.

Concerns were shared about potential double regulation with, for example, the MWEI BREF and the Extractive Waste Directive (Directive 2006/21/EC) as well as the European Critical Raw Materials (CRM) Act (Regulation (EU) 2024/1252). EU-BRITE pointed out that double regulation should be avoided.

At the end of the discussion, the consensus reached was as follows.

Conclusions reached by the TWG:

- To include as a KEI the generation of residues and their recovery (e.g. for the purpose of production of concentrates of the metals listed under point 3.6 of Annex I to the IED).
- To collect data and contextual information on residue types (e.g. tailings, waste rock, sludge, spent chemicals) generated in mining operations, their specific quantities, waste generation prevention measures and waste management techniques (e.g. reuse, recovery, recycling and/or disposal). Existing waste management plans (according to Art. 5 of Directive 2006/21/EC) are a source of information.
- The TWG to decide at a later stage, based on the data collected through the questionnaires, whether BAT-AEPLs and/or benchmarks should be derived.
- To collect information on techniques to promote circular economy.

5.5 Decarbonisation and CO_2 emissions

In BP Section 3.2.9, EU-BRITE proposed the following:

- To collect information on techniques related to the reduction of CO_2 emissions from the relevant mining operations covered by the scope of the MIN BREF (e.g. electrification).
- To collect data on CO_2 emissions through site-specific questionnaires. The TWG to decide at a later stage, based on the data collected, whether BAT-AELs or benchmarks should be derived.

In general, the TWG supported EU-BRITE's proposal. The TWG reflected on the close link between energy consumption and decarbonisation. One MS pointed out that mines will be fully electrified in the near future. Another MS expressed the need to gather contextual information on ways and costs related to electrification. Additionally, an industrial association pointed out that decarbonisation should encompass the entire life cycle of a mine and respect the principle of technology neutrality.

At the end of the discussion, the consensus reached was as follows.

Conclusions reached by the TWG:

- To collect information on techniques related to the reduction of CO_2 emissions from the relevant mining operations covered by the scope of the MIN BREF (e.g. electrification).
- To collect data on CO_2 emissions through questionnaires and the relevant contextual information (see also the conclusion on energy consumption) needed to understand and compare the collected data.
- The TWG to decide at a later stage, based on the data collected, whether BAT-AELs should be derived.

6 MONITORING

In BP Section 4.3, EU-BRITE proposed the following:

- To collect data related to monitoring of emissions (e.g. to air and to water) and consumption levels (e.g. water, energy).
- To collect data on substances/parameters monitored by process/source during the different mining phases. To collect information on the standards used and on the monitoring frequency.
- To collect data on the performance of emission abatement equipment.

The proposal was not foreseen for discussion at the KoM. The original EU-BRITE proposal was adopted without any change.

Conclusions reached by the TWG:

- To collect data related to monitoring of emissions (e.g. to air and to water) and consumption levels (e.g. water, energy).
- To collect data on substances/parameters monitored by process/source during the different mining phases. To collect information on the standards used and on the monitoring frequency.
- To collect data on the performance of emission abatement equipment.

7 ODOUR

In BP Section 4.1, EU-BRITE proposed the following:

- To include odour emissions as a KEI and to collect data through site/plant-specific questionnaires.
- To collect data on odour emissions for the relevant mining operations (e.g. drilling, blasting, crushing, grinding, flotation, (cyanide) leaching, waste water treatment) covered by the scope of the MIN BREF.
- To collect information on measures/techniques to prevent and/or to reduce diffuse odour emissions.

Member States and one industrial association requested this topic for discussion. The proposal was discussed in detail. Concern was expressed about the examples of relevant mining operations provided in the proposal. It was pointed out by a MS that odour may not always be considered a KEI or as an emission. One industrial association expressed concern about the collection of odour data.

At the end of the discussion, the consensus reached was as follows.

Conclusions reached by the TWG:

- To collect information/data on odour for the relevant mining operations covered by the scope of the MIN BREF.
- To collect information on relevant measures/techniques.

8 NOISE AND VIBRATION

In BP Section 4.2, EU-BRITE proposed the following:

- To include noise and vibration as KEIs and to collect information and data on noise emissions and vibrations through site-specific questionnaires.
- To collect information on techniques/measures to prevent and/or to reduce noise emissions and vibration impact.

One MS requested this topic for discussion to express its concerns about the setting of BAT-AELs for noise and vibration.

The EU-BRITE proposal was discussed and it was supported by the TWG.

At the end of the discussion, the consensus reached was as follows.

Conclusions reached by the TWG:

- To include noise and vibration as KEIs and to collect information and data on noise emissions and vibrations through questionnaires.
- To collect information on techniques/measures to prevent and/or to reduce noise emissions and vibration impact.

9 NORMAL OPERATING CONDITIONS AND OTHER THAN NORMAL OPERATING CONDITIONS

In BP Section 4.5, EU-BRITE proposed the following:

- To collect information on ‘normal’ operating conditions and ‘other than normal’ operating conditions for the mining operations under the scope of the MIN BREF.
- The TWG to identify ‘normal’ and ‘other than normal’ operating conditions for the different mining operations under the scope of the MIN BREF.

One industry association requested this topic for discussion. The need for a precise definition and clear boundaries between NOC and OTNOC was underlined by several TWG members. EU-BRITE clarified that the exchange of information in the TWG would be precisely to explain and to identify which ‘other than normal’ operating conditions (OTNOC) exist in this sector.

At the end of the discussion, the consensus reached was as follows.

Conclusions reached by the TWG:

- The TWG to identify ‘normal’ and ‘other than normal’ operating conditions for the different mining operations under the scope of the MIN BREF.
- To collect information on ‘normal’ operating conditions and ‘other than normal’ operating conditions for the mining operations under the scope of the MIN BREF.

10 OCCUPATIONAL HEALTH AND SAFETY

In BP Section 4.4, EU-BRITE did not make any proposal.

The environmental NGO requested this topic for discussion. It was pointed out by EU-BRITE and several TWG members that health and safety is already regulated in this sector. One MS and one industry association pointed out that health and safety in mining is driven by specific rules and Directives for the mining industry, and it is already regulated with EU regulations and national regulations. One industry association specified that health is already addressed in the BREF, e.g. through KEIs for emissions to air and water (see Sections 4.2 and 4.3).

TWG members expressed concerns about double regulation.

EU-BRITE clarified 1) that, in general, a BREF is not meant to impose double regulation, as already mentioned, and 2) that it would not exclude a specific BAT, which could be, for example, a discussion on cross-media effects relating to occupational health and safety. This would be a natural discussion within the TWG specifically for a particular BAT.

At the end of the discussion, the consensus reached was as follows.

Conclusions reached by the TWG:

Not to cover occupational health and safety.

11 CONFIDENTIALITY ISSUES

In BP Section 4.6, EU-BRITE proposed the following:

- To design the questionnaire in a way that avoids requesting data considered CBI (confidential business information) as much as possible so that all data provided by operators can be posted directly onto BATIS by Member States' representatives and thus shared with the whole TWG.
- The TWG to decide during the questionnaire development phase about the type and format of potentially confidential information that needs to be collected.
- In the event that certain data are considered CBI:
- the Member States' representatives in the TWG to: i) submit the versions of the questionnaires containing the confidential information directly to EU-BRITE via email, and ii) post the versions of the questionnaires containing the non-confidential information onto BATIS.
- The TWG to agree on the confidentiality and non-disclosure agreement to be signed for data collected as CBI to be discussed and analysed, so as to ensure the largest possible participation of TWG members, while protecting the legitimate economic interests of site/plant operators and minimising the risk of disclosure.

One industrial association and the environmental NGO requested this topic for discussion. The TWG members recognised the importance of this topic, acknowledging its crucial role in achieving a high-quality BREF. Several TWG members emphasised that gaining expertise in CBI is essential to reaching this objective. In addition, EU-BRITE provided a concise overview of the primary objectives and key considerations.

At the end of the discussion, the consensus reached was as follows, leaving EU-BRITE's initial proposal unchanged.

Conclusions reached by the TWG:

- To design the questionnaire in a way that avoids requesting data considered CBI (confidential business information) as much as possible so that all data provided by operators can be posted directly onto BATIS by Member States' representatives and thus shared with the whole TWG.
- The TWG to decide during the questionnaire development phase about the type and format of potentially confidential information that needs to be collected.
- In the event that certain data are considered CBI:
- the Member States' representatives in the TWG to: i) submit the versions of the questionnaires containing the confidential information directly to EU-BRITE via email, and ii) post the versions of the questionnaires containing the non-confidential information onto BATIS.
- The TWG to agree on the confidentiality and non-disclosure agreement to be signed for data collected as CBI to be discussed and analysed, so as to ensure the largest possible participation of TWG members, while protecting the legitimate economic interests of site/plant operators and minimising the risk of disclosure.

12 STRUCTURE OF THE BREF

In BP Section 4.7, EU-BRITE proposed the following:

- See BP Section 4.7 for the proposed structure of the MIN BREF.

Three MS and one industrial association requested this topic for discussion. The proposal was discussed and it was pointed out that a detailed structure and layout of the BREF will be proposed when drafting D1.

At the end of the discussion, the consensus reached was as follows.

Conclusions reached by the TWG:

- The detailed structure and layout of the BREF and related BAT conclusions will be proposed when drafting D1 (with the active contribution of the TWG), informed by the BREF Guidance.

13 PHYSICAL STABILITY/RESPONSE TO EMERGENCY SITUATIONS/BEST PRACTICES ON LIABILITY AND SAFETY RISK ISSUES

This topic was introduced by a Member State and the environmental NGO. Some TWG members expressed concern about possible overlapping legislation. It was emphasised by an industrial association that this topic may be covered by other legislation.

The environmental NGO pointed out that it does not agree with not collecting information on best practices on liability and safety risk (prevention) issues.

At the end of the discussion, a consensus was reached, with one dissenting opinion.

Conclusions reached by the TWG:

- Not to cover physical stability/response to emergency situations/best practices on liability and safety risk issues.
- To add in the kick-off meeting report that EEB disagrees with not collecting information on best practice on liability and safety risk (prevention) issues.

14 BIODIVERSITY

A MS and the environmental NGO introduced this topic and it was discussed in detail. It was pointed out by several Member States that this topic is part of an environmental impact assessment and is already addressed in that context.

The environmental NGO emphasised that the issue of biodiversity is a new point under the revised IED (point 10 in Annex IV to the revised IED, i.e. Criteria for determining best available techniques: *"the need to prevent or reduce to a minimum the overall impact of the emissions on the environment, including biodiversity, and the risks to it"*) and should be taken into account. DG ENV indicated that the impact on biodiversity being part of the environmental impact assessment is not the same as collecting information on specific techniques actually applied by installations to reduce this impact (as is also the case for emissions to air or water). Information on techniques to protect or to reduce the impact on biodiversity could be collected during the data collection phase via the questionnaire. Some MS supported the addition of this issue and one MS supported the collection of data on impacts on biodiversity and impacts on land use.

At the end of the discussion, the consensus reached was as follows.

Conclusions reached by the TWG:

- The TWG to take into consideration techniques to reduce the impact of emissions on biodiversity.

15 GEOCHEMICAL BASELINE

A MS raised this new point for consideration, highlighting that the existing EMS and the baseline report do not address the geochemical baseline and the soil characteristics.

It was agreed to include this topic in the mandate of the TWG subgroup to further define the remediation steps (see also Section 3.2 and Section 19.1).

At the end of the discussion, the consensus reached was as follows.

Conclusions reached by the TWG:

- To include the geochemical baseline in the mandate of the TWG subgroup that will be established about remediation steps (*see conclusion slide 5)*.

16 CHANGE OF THE NAME OF THE BREF

This topic was introduced by two industrial associations. It was discussed and several names were proposed. No clear consensus could be reached on the options for a new name suggested by TWG members. It was pointed out that the name of the BREF can also be changed during the drafting of the BREF, if necessary.

At the end of the discussion the consensus reached was as follows.

Conclusions reached by the TWG:

- The TWG to further reflect in the future on the possible change of the name of the BREF.

17 EMERGING TECHNIQUES (ET) AND LINK WITH INCITE

In BP Section 3.3, EU-BRITE proposed the following:

- To collect information and performance data on emerging techniques applicable to the activities covered by the MIN BREF and associated with the agreed KEI (e.g. emissions to air and to water, consumption of energy, water, raw materials, decarbonisation, chemicals). The TWG to decide at a later stage, based on the data and information collected, whether ET-AELs and/or ET-AEPLs should be derived.

EU-BRITE presented the basic elements of INCITE (the Innovation Centre for Industrial Transformation and Emissions), launched in June 2024. INCITE (https://innovation-centre-for-industrial-transformation.ec.europa.eu/) collects and analyses information on innovative techniques, including emerging and transformative techniques, which contribute *inter alia* to minimisation of pollution, decarbonisation, resource efficiency, a circular economy using fewer or safer chemicals, relevant to activities within the scope of the IED. Therefore, INCITE would feed the MIN BREF drafting process with information on emerging techniques that may be applicable in activities covered by the MIN BREF.

One industry association raised the need for an implementing act for INCITE, which would be helpful for the promotion of INCITE. EU-BRITE noted that INCITE has a mandate; it is included in the revised IED. With regard to Article 27c of the IED, one MS expressed the view that it would be up to the competent authority to set ELVs in the permit linked to ET-AELs and/or ET-AEPLs (ET BAT conclusions in the BREF). The MS was of the opinion that, for any emerging technique in the BREF, ET-AELs and/or ET-AEPLs should be derived. EU-BRITE pointed out that this may be considered if the ET has a strong influence on the emissions; however, there may be other ET not directly associated with emissions, e.g. substitution techniques for hazardous chemicals.

It was emphasised that the determination of emerging technique (ET) is part of the information exchange and it would be useful to collect information on ET applicable to the activities covered under the MIN BREF.

Following the discussion, the consensus reached was as follows.

Conclusions reached by the TWG:

- To collect information and performance data on emerging techniques applicable to the activities covered by the MIN BREF and associated with the agreed KEI (e.g. emissions to air and to water, consumption of energy, water, raw materials, decarbonisation, chemicals). Input from INCITE may also be considered.
- The TWG to identify the relevant emerging techniques (ET) based on the assessment of collected data/information.
- The TWG to decide at a later stage, based on the data and information collected, whether ET-AELs and/or ET-AEPLs should be derived.

18 INFORMATION AND DATA COLLECTION

18.1 Expression of BAT-AELs for emissions to air and water

In BP Section 3.4.1, EU-BRITE proposed the following:

- To generally express BAT-AELs for emissions to air and to water in concentrations, and/or if deemed appropriate as specific loads and/or coupled with abatement efficiencies.
- To include in the data collection the information needed to evaluate emission loads, abatement efficiencies or specific energy consumption.
- During the drafting of the questionnaire(s), to clearly define all parameters influencing emission concentrations, loads or abatement efficiencies (e.g. type of ores extracted/processed, raw materials, boundaries of the process, flows of materials, products, pollutants and waste waters, specific operating conditions associated with the mining of (specific) ores/manufacture of products).
- To clearly define (during the drafting of the questionnaire(s)) all relevant information influencing emission concentrations or abatement efficiencies (e.g. techniques used, reference conditions, type and quantity of products/raw materials, boundaries of the process/system, direct/indirect waste water discharge, sources and characteristics of waste gases and waste waters, specific operating conditions associated with the mining processes).

The TWG generally supported EU-BRITE's proposal. During the KoM, the TWG reactions focused mainly on the potential use of both specific loads and concentrations to express BAT-AELs for emissions to air and water. The exchange revealed some advantages and disadvantages of emissions expressed as loads or concentrations and an industrial association emphasised the need to consider cross-media effects. One MS pointed out that it may be possible to have specific loads, but that mass load is also important. This was supported by the environmental NGO. Additionally, it was stressed by one MS that information on mass load may be confidential business information (CBI) and it was noted that information collection should focus on the efficiency of the process and then the specific load.

EU-BRITE indicated that this issue would be revisited at a later stage during the development of the questionnaire. The TWG will clearly define all parameters influencing emission concentrations, loads or abatement efficiencies.

At the end of the discussion, the consensus reached was as follows.

Conclusions reached by the TWG:

- To generally express BAT-AELs for emissions to air and to water in concentrations, and/or if deemed appropriate as specific loads and/or coupled with abatement efficiencies.
- To include in the data collection the information needed to evaluate emission loads, abatement efficiencies or associated cross-media effects (e.g. energy consumption).
- To clearly define (during the drafting of the questionnaire(s)) all parameters influencing emission concentrations, loads or abatement efficiencies (e.g. type of ores extracted/processed, raw materials, boundaries of the process, flows of materials, products, pollutants and waste waters, specific operating conditions associated with the mining of (specific) ores).
- To clearly define (during the drafting of the questionnaire(s)) all relevant information influencing emission concentrations, mass and/or specific loads or abatement efficiencies (e.g. techniques used, reference conditions, type and quantity of products/raw materials, boundaries of the process/system, direct/indirect waste water discharge, sources and characteristics of waste gases and waste waters, specific operating conditions associated with the mining processes).

18.2 Averaging periods for BAT-AELs related to emissions to air

In BP Section 3.4.1.1, EU-BRITE proposed the following:

- To generally express BAT-AELs as short-term averages, i.e. as daily averages (for continuous measurements) or as averages over the sampling period (for periodic measurements).

EU-BRITE provided some clarification on this topic and the TWG shared some reflections on averaging periods. EU-BRITE emphasised that this issue will be discussed during the development of the questionnaire. Furthermore, EU-BRITE pointed out that the proposed wording is standard text and is used in all the other BREFs that include data for emissions to air (or that cover emissions to air).

At the end of the discussion, the consensus reached was as follows.

Conclusions reached by the TWG:

- To generally express BAT-AELs as short-term averages, i.e. as daily averages (for continuous measurements) or as averages over the sampling period (for periodic measurements).

18.3 Averaging periods for BAT-AELs related to emissions to water

In BP Section 3.4.1.2, EU-BRITE proposed the following:

- To generally express BAT-AELs as daily averages, obtained via 24-hour flow-proportional composite samples and in the case of batch discharges as average values over the release duration obtained via flow-proportional composite samples.
  - To complement that:
    - time-proportional composite samples may also be considered provided that sufficient flow stability is achieved;
    - spot sampling may also be considered provided that the effluent is appropriately mixed and homogeneous.

The TWG discussed the proposal. Several TWG members pointed out that EU-BRITE's initial proposal appears to be primarily based on standard industrial installations. They expressed concerns that it may not be adequately tailored to the specific characteristics and requirements of mining activities. Furthermore, drawing on their experience, one TWG member suggested that a clarification be added to account for the specificities of sampling techniques.

At the end of the discussion, the consensus reached was as follows.

Conclusions reached by the TWG:

- To generally express BAT-AELs as daily averages, obtained via 24-hour flow-proportional composite samples and in the case of batch discharges as average values over the release duration obtained via flow-proportional composite samples.
  - To complement that:
    - time-proportional composite samples may also be considered provided that sufficient flow stability is achieved;
    - spot sampling may also be considered provided that the effluent is appropriately mixed and homogeneous.
- The TWG to decide at a later stage which other sampling techniques could be considered appropriate.

18.4 Expression of BAT-AEPLs on consumption, resource efficiency, reuse of materials/water and residue generation

In BP Section 3.4.2., EU-BRITE proposed the following:

- To collect data on energy consumption expressed as specific energy consumption (ratio of total energy consumption divided by a suitable activity rate figure), on a yearly averaging basis.
- To collect data on water consumption and reuse expressed as specific water consumption (e.g. m3/tonne of ore extracted/processed) on a yearly average basis. These data may be complemented by data on specific water discharge (expressed as yearly averages).
- To collect data on waste water discharge expressed as specific waste water discharge on a yearly average basis.
- To collect data on process chemicals consumption expressed as specific process chemical consumption on a yearly average basis.
- To collect data on residue generation expressed as specific waste generation on a yearly basis (e.g. waste rock, tailings).
- The TWG to decide at the initial stage of the questionnaire development phase on key data features, e.g. operating parameters.

The proposal was discussed. Some TWG members requested additional details, particularly regarding the time range for data collection, considering the varying activity rates during the installation's life cycle to account for the mining process' discontinuity. EU-BRITE emphasised that the process requires the collection of data over several years. Furthermore, it will be discussed during the development of the questionnaire.

At the end of the discussion, the consensus reached was as follows.

Conclusions reached by the TWG:

- To collect data on energy consumption expressed as specific energy consumption (ratio of total energy consumption divided by a suitable activity rate figure), on a yearly averaging basis.
- To collect data on water consumption and reuse expressed as specific water consumption (e.g. m3/tonne of ore extracted/processed) on a yearly average basis. These data may be complemented by data on specific water discharge (expressed as yearly averages).
- To collect data on waste water discharge expressed as specific waste water discharge on a yearly average basis.
- To collect data on process chemicals consumption expressed as specific process chemical consumption on a yearly average basis.
- To collect data on residue generation expressed as specific waste generation on a yearly basis (e.g. waste rock, tailings).
- The TWG to decide at the initial stage of the questionnaire development phase on key data features, e.g. operating parameters.

18.5 Selection of installations for the data collection

In BP Section 4.8, EU-BRITE proposed the following:

- The TWG to submit or complete proposals of well-performing (including best-performing) mining sites/plants to participate in the data collection.

The proposal was not foreseen for discussion at the KoM. The original EU-BRITE proposal was adopted with a minor wording change for consistency reasons.

Conclusions reached by the TWG:

- The TWG to submit or complete proposals of well-performing (including best performing) mining installations to participate in the data collection.

18.6 Data collection procedure (questionnaire)

In BP Section 4.9, EU-BRITE proposed the following:

- To follow the established BREF process for the collection of site/plant-specific data via questionnaires including the following:
  - the preparation of the draft questionnaire by EU-BRITE followed by the commenting of the whole TWG, if necessary in several iterations;
  - the organisation of a questionnaire workshop to finalise the questionnaire;
  - the testing of the draft final questionnaire by a selected (small) number of sites;
  - the preparation of the final questionnaire by EU-BRITE;
  - the distribution of the final questionnaire through Member States' representatives;
  - the filling in of the questionnaires by the sites/plants' operators;
  - the collection of the filled-in questionnaires by Member States' representatives;
  - the quality check of the filled-in questionnaires by Member States' representatives (possibly) with the help of a checklist that the TWG and EU-BRITE could have developed;
  - the submission of the quality-checked questionnaires to EU-BRITE by Member States' representatives:
  - for the non-confidential version: submission to the TWG via BATIS;
  - for the confidential version: submission to EU-BRITE via email;
  - the TWG decides on the content and format of the questionnaire during the preparation as described above.
- To collect data for the reference years 2024, 2023, 2022 or, if such data are not available, for the last 3 years for which data are available.

The proposal was not foreseen for discussion at the KoM. The original EU-BRITE proposal was adopted with minor wording changes for consistency reasons.

Conclusions reached by the TWG:

- To follow the established BREF process for the collection of data via questionnaires including the following:
  - the preparation of the draft questionnaire by EU-BRITE followed by the commenting of the whole TWG, if necessary in several iterations;
  - the organisation of a questionnaire workshop to finalise the questionnaire;
  - the testing of the draft final questionnaire by a selected (small) number of sites;
  - the preparation of the final questionnaire by EU-BRITE;
  - the distribution of the final questionnaire through Member States' representatives;
  - the filling in of the questionnaires by the installation operators;
  - the collection of the filled-in questionnaires by Member States' representatives;
  - the quality check of the filled-in questionnaires by Member States' representatives (possibly) with the help of a checklist that the TWG and EU-BRITE could have developed;
  - the submission of the quality-checked questionnaires to EU-BRITE by Member States' representatives:
    - for the non-confidential version: submission to the TWG via BATIS;
    - for the confidential version: submission to EU-BRITE via email;
  - the TWG decides on the content and format of the questionnaire during the preparation as described above.

- To collect data for the reference years 2024, 2023, 2022 or, if such data are not available, for the last 3 years for which data are available/relevant.

19 NEXT STEPS AND TENTATIVE TIMELINE OF THE DATA AND INFORMATION COLLECTION

EU-BRITE presented a tentative timeline for the next steps of the MIN BREF drawing up process. As a result of the discussion two steps were added to the table (see Table 5), corresponding to the creation of two TWG subgroups to address specific issues.

One TWG subgroup is dedicated to work on remediation steps, including discussion of the geochemical baseline (see conclusion slides 5 and 44). The other TWG subgroup is dedicated to reviewing of the list of substances provided by ECHA (see conclusion slide 21).

The questionnaire development step was discussed and the tentative timeline was slightly modified to accommodate constraints during the summer of 2025.

At the end of the discussion, after considering all the arguments, the consensus reached was as follows.

Conclusions reached by the TWG:

Table 5: Next steps – tentative timeline of the MIN BREF drawing up process

Step	Tentative time
TWG Subgroup on remediation steps (see conclusion slides 5 and 44). EU-BRITE to prepare the mandate.	Shortly after the KoM
TWG Subgroup to review the list of substances provided by ECHA (see conclusion slide 21). EU-BRITE to prepare the mandate.	Shortly after the KoM
EU-BRITE to prepare the questionnaire for data collection and to issue the first draft questionnaire template	February/March 2025
TWG to provide proposals of well-performing reference installations/sites for the data collection via questionnaire	End of February 2025
TWG feedback on the first draft questionnaire	End of March 2025
EU-BRITE to compile the list of well-performing reference installations/sites and to check its completeness; if necessary, EU-BRITE to ask TWG members to amend/complete the list	Mid-April 2025
EU-BRITE to issue the second draft questionnaire	End of April 2025
Workshop on the questionnaire finalisation	End of June 2025 (or before issuing second draft questionnaire)
EU-BRITE to issue the third draft questionnaire (if necessary)	Mid-July 2025
Questionnaire testing	Mid-September 2025
EU-BRITE to issue the final questionnaire and distribution to the participating plants	October 2025
Submission of "bulk" information	Q1 2025 - October 2025
Submission of filled-in questionnaires in BATIS	Q1 2026

19.1 TWG subgroups

During the discussion, the TWG agreed to establish two TWG subgroups:

1) one for the preparation of a proposal on remediation steps to be covered in the scope of the MIN BREF and to identify the geochemical baselines to be considered in defining the content of the baseline report (see conclusion slides 5 and 44 and Section 3.2);
2) the other to review the list of substances provided by ECHA in order to identify the relevant process chemicals used in the mining operations under the scope of the MIN BREF and the chemicals (e.g. reagents, chemical agents and explosives) to be included as KEIs (see conclusion slide 21 and Section 5.1).

The establishment of TWG subgroups is addressed by the BREF Guidance in Implementing Decision 2012/119/EU, Section 4.3.3, which states the following:

> *"To address specific issues within the scope of the work, the TWG may decide to establish subgroups in order to undertake specific tasks such as to collect, analyse, structure and discuss information and data, discuss comments to proposed draft texts, or to prepare and develop templates or documents. The functioning of such subgroups is managed in a transparent way by the EIPPCB enabling all TWG members to have access to the groups and allowing them to follow and understand the subgroup's activities and its outcome (e.g., meeting agendas and minutes and reports are uploaded onto BATIS in a timely manner).*
>
> *Meetings of TWG subgroups can be held on the premises of the Commission in Seville, Spain or at other locations.*
>
> *Discussions and work in the subgroups will not replace the plenary TWG meetings where decisions are made involving the whole TWG."*

The TWG agreed at the KoM that EU-BRITE would lead and propose the mandate for the TWG subgroups.

Among others, it was pointed out by EU-BRITE that:

- the subgroups will not make any final decisions that affect the BREF, BAT, BAT-AELs, BAT-AEPLs or benchmarks;
- the subgroups will not propose BAT conclusions, BAT-AELs, BAT-AEPLs or benchmarks;
- the subgroups will make recommendations to the whole TWG, which may consider them in the drawing up of the MIN BREF and the drafting of BAT conclusions;

It was also agreed that the subgroup meetings could be held online or in a hybrid format.

It was agreed that EU-BRITE would prepare the mandates for these two TWG subgroups shortly after the KoM.

19.2 Site visits

The TWG is invited to propose mining sites for site visits. EU-BRITE explained the objectives and modalities of site visits according to Section 4.4.4 of the BREF Guidance. Site visits constitute an important part of the MIN BREF drawing up process. They provide an insight into the production/techniques of the chemical sectors covered in the MIN BREF.

There were site visit proposals from AT, EL, FI, SE and the industry association EUROMINES.

- AT proposed visits to open pit and underground iron and tungsten mines.
- FI and SE proposed to combine visits to mines in both countries. They offered TWG members to visit representative mines and processes, probably also in NO.
- EL proposed visits to a bauxite mine and a gold mine.
- EUROMINES proposed visits of representative installations throughout Europe and volunteered to organise the visits.

EU-BRITE welcomed all the preliminary announcements, inviting participants to provide information on the type/characteristics of the production sites and possible planning.

EU-BRITE pointed out that information about site visits is shared in advance to allow competent authorities and TWG members to participate. It was mentioned that site visits could take place during the drafting of the questionnaire and the collection of bulk information. Brief reports will be made available on BATIS.

It was concluded that TWG members will contact EU-BRITE to propose and organise site visits.

20 INTRODUCTION TO BATIS

EU-BRITE introduced the new version of BATIS – the Best Available Techniques Information System, a web-based software to facilitate the exchange of information for the drawing up and review of BREFs. More specifically, BATIS is used to manage the list of TWG members and observers and to make all data and information collected in the BREF drawing up process available to the TWG.

EU-BRITE provided hands-on guidance on basic BATIS features, e.g. obtaining and changing login credentials, reviewing and adapting personal information, the basic structure of MIN BREF folders, adding new posts, and uploading and downloading documents.

The TWG was invited to contact EU-BRITE with any further technical questions or comments.