MINUTES

AP refer to Action Points listed at the end of this document.

1. **Welcome & Introduction**
   1.1. **Reminder on Confidentiality and Competition Law.** Participants were reminded on their obligation to comply with confidentiality and Competition Law rules.

   1.2. **Tour de table and apologies.** The list of participants and apologies is available in Annex 1.

   1.3. **Approval of the agenda.** The agenda is available in Annex 1. No remarks/additions; agenda approved.

2. **Information from ECHA on SID/sameness of inorganic UVCBs**
   2.1. **Report from ECHA workshop on SID and substance sameness 6-7 Oct** *(Cf. slides 6-17 in Annex 2)*
   On 6-7 October, ECHA held a workshop on SID and substance sameness (attended by Katrien Arijs), with a focus on UVCBs (cf. Annex 3.1 and 3.2):
   - The workshop focused on administrative sameness (i.e. which substances can be registered together) rather than hazard sameness. Presentations were given by ECHA, MSCA and industry and discussions were held in breakout groups on how to assess the sameness of UVCBs. Workshop presentations are available online.
   - SID is often based on **EINECS** entries, but the EINECS inventory contains several inconsistencies: one EINECS entry may correspond to several substances or several EINECS entries may correspond to one and the same substance. ECHA stressed the importance of resolving uncertainties on substance sameness regardless of whether a substance is covered by EINECS or not.
   - ECHA wants to streamline the methodology to identify UVCBs, inspired from rules applicable to well-defined substances. The **proposed methodology for substance sameness follows 3 hierarchical steps/depictions** and is based on the EINECS reporting rules (i.e. no introduction of new substance sameness criteria):
     1) Identify the parameters allowing a structural representation of the substance: this should reflect the existence of 1 or more predominant constituents/groups of constituents. The 80% rules are proposed for comparing compositions between UVCBs, to be seen as a coherent substance sameness criterion across mono-, multi-constituent and UVCB substances (baseline criterion).
     2) Identify any additional parameters necessary to represent the substance by the reaction scheme: not relevant for PM Refinables as they are derived from a refining process rather than from chemical reactions.
     3) Identify any additional parameters necessary to represent the substance by the process: source + technology. Outputs from processes relying on different sources or process technologies would in principle not refer to the same substance. The definition of the source must accommodate the inherent variability of a manufacturing process. E.g., the use of secondary sources which identity cannot be predicted over time may not necessarily need to be defined precisely.

     These 3 steps/depictions will not be applicable to all UVCBs but when one is not applicable, then more information and justification must be provided on the others (the more the depiction relies on descriptions as process output, the higher the uncertainties become with respect to the similarities between substances).
   - The proposed methodology should overall be seen as a prolongation of existing SID principles and therefore not in contradiction with the existing Guidance on SID.
   - The proposed methodology allows registrants to deviate from the rules for setting the substance sameness criteria, as it can be done for well-defined substances. The deviation must however be **clearly and transparently justified**.
   - Key messages from the workshop:
     - Both the different industry sectors and the MSCA are still struggling with SID of UVCBs.
     - There was general support to explore the applicability of the proposed 3-step sameness methodology further, but there were still quite some questions on how it will work in practice. ECHA does not have answers to all these questions and recognises there will always be a 'grey zone' for SID of UVCBs.
     - In the 'grey zone', after using the proposed methodology, it is important to make the argumentation that the chosen SID approach is sound.
     - The use of hazard information in deciding on SID of UVCBs requires further discussion. There was general agreement that different classifications can be covered in a joint

registration.
- **ECHA indicated that they do not expect us to revise our SID approach completely but thinks some further work is needed from industry's side to rationalise and document our approach so that it is transparent.**

In ECHA's REACH 2018 Roadmap, the following milestones for 2015 are defined with regard to SID:
- Methodology established for substance sameness.
- Potential review of the SID Guidance or other types of material for addressing substance sameness.

An **SID project** is currently ongoing tendered out by the **European Commission**, in which SID and sameness of complex substances is investigated. The aim is to develop sector-specific factsheets providing key information and best practices in identification of complex substances in selected industry sectors. EM has reached out to the European Commission on this project in case they want to draft NFM sector specific sheets for inorganic UVCBs. An SID workshop is planned 27-28 April in Brussels.

Comments:
- It was noted that, although clear rules for UVCBs are lacking in the current SID guidance, ECHA is demanding more and more information on **substance characterization** for UVCBs and is applying more stringent rules than currently in the guidance (e.g. ongoing discussions with Reconsile consortium regarding Karstedt concentrate). Therefore, we may have to perform further analyses to identify speciation/chemical structures in the Refinables. It was further noted that several years ago, Anglo Platinum volunteered to perform speciation analysis on other companies' Refinables by QEM*SEM (Quantitative Evaluation of Minerals by Scanning Electron Microscopy) but some companies are reluctant to do this for confidentiality reasons. The Expert Group agreed that for now, we should justify the SID of the Refinables with the speciation information currently available (based on (limited) available analysis / know-how) and not invest in further analysis until challenged by ECHA. We should however put speciation analysis in the Refinables contingency budget. **AP1**
- PM Refinables are specifically variable in composition because refining of Au, Ag and PGMs is performed together (in contrast to e.g. Cu refining). Because of this large variability, demonstrating sameness based on **structural representation** and the 80% rules will be difficult for most Refinables (*cf. slides 16-17 in Annex 2*), even for different streams of the same Refinable within 1 company. Furthermore, it was noted that there might be a confidentiality issue in disclosing company-specific composition information.
- As it is currently not specified how detailed the structural representation of UVCBs should be for sameness purposes, we might be able to demonstrate sameness based on groups of constituents (e.g. metal oxides).
- Even though depiction based on structural representation might not be applicable to (some) PM Refinables, the Expert Group agreed we should try this out first on those PM Refinables where we have sufficient details on the composition, i.e. the PM slags and PM slimes and sludges. **AP2-5**
- The Expert Group agreed we will have to justify why structural representation is not applicable to prove sameness for (some) PM Refinables and we should focus on similarities in the **process description** to avoid having to subgroup down to the level of single company UVCB submissions. When the depiction of the substance mainly relies on process description, sufficient explanation is needed demonstrating that the set of hazard data included in the registration duly cover the UVCBs registered together. Most Refinables contain about 7-8 CMR substances (which drive toxicity and classification) accounting for only 10-20% of the composition and 80-90% of their composition is 'benign'. Bearing in mind that the risk model we use is concentrating on the CMR substances in the composition, we are focusing on process for identification.

2.2. **Examples how ECHA has challenged SID of inorganic UVCBs**
- **Ferromolybdenum slags**: A compliance check was done on the dossiers from the LR and the co-registrant. ECHA wanted a much more comprehensive technological process description that included more detail of process inputs and process parameters, an explanation why variable inputs would not lead to different grades of the UVCB substance, more information about the known constituents of the UVCB and more details on the analytical methodologies. Responses were submitted in December 2014 and the key challenge for the Mo consortium was to align responses so that small differences in inputs and process would not encourage ECHA to decide that different grades of the substance are produced.

- **Board of Appeal case A-008-2012** (*cf. Annex 3.3*): A compliance check was done on the dossier of SDA product (desulphurization of exhaust gases by semi-dry absorption method from the coal fired power plants). The manufacturing process for this substance was described as desulphurization carried out with preliminary dust (ash) extraction step but also with partial or no dust extraction, leading to 'pure SDA' or 'mixture SDA Product and ash'. ECHA concluded that the registration dossier contained information on more than one substance and separate registrations were needed. As the application or non-application of a dust extraction step in the process resulted in systematic differences in compositions, the composition was considered the root cause for differentiating between substances (regardless of whether they have the same hazard properties). Therefore, a separate registration was needed for the pure SDA and all references to the mixture should be removed from that registration. ECHA judged that the 'Mixture SDA Product and ash' cannot be considered covered by the registrations of the pure SDA and the ash, but that a separate registration was needed for the mixture. This because the output is the result of the same process and would therefore be considered a single substance for registration purposes and because the 2 substances cannot be physically separated. The Board of Appeal however judged that ECHA is not competent to instruct a particular company to register a particular substance or substances (responsibility of the MSCA) but that the company should re-examine its registration strategy with regard to which substances it is obliged to register under REACH.

- One member noted that they sent an **inquiry dossier for PM slags** to ECHA last Summer and they were requested to add a lot more detail to the description of the substance, down to the level of a company-specific substance. In the end, they registered under the existing PM slags and left the inquiry number blank.

3. Refinables SID decision tree: discussion of process description of all Refinables and need for splitting
(Cf. slides 20-35 in Annex 2 and Annexes 4.1-4.4, 5 & 6)

- The original SID of the Refinables started from EINECS entries, whereas the decision tree starts from the different refining processes, and Refinables are assigned to the processes to check if no over-grouping was done.
- Annex 5 is an overview of the Refinables process and source information available to date. This document is a reference document compiling the available process / source information from the ID cards, CSRs and questionnaires.
- Annex 6 lists process definition drafts for all PM refining processes mentioned in the BREF, as well as which Refinables would originate from these processes. This document was kindly prepared by Christoph Roehlich.

At the meeting, the decision tree and the process definitions were discussed in an effort to align them.

3.1. **Hydrometallurgical processes and resulting Refinables**

- The Expert Group agreed on the definition of hydrometallurgical processes but suggested for the electrometallurgical processes:
  - to include these under the hydrometallurgical processes, and
  - to rename these to (hydro-)electrochemical refining.
- The process definitions document / decision tree only cover the solid intermediates generated; what about the **liquid intermediates / solutions**? It was noted that although these are often non-isolated intermediates subject to further processing, they are isolated in some plants. They may be considered mixtures (**AP6**). It was further noted that under the PM slimes and sludges, some solutions are reported (streams from leaching).

  (***Post-meeting note***: *In the SID Guidance, the definition of a mixture includes the reference to solution ('Mixture or solution composed of two or more substances.'). These liquid intermediates could thus be considered as a mixture of UVCBs. It is up to PMC Members to make the correct interpretation.)*

- The Expert Group agreed it is not necessary to include **distillation** as a separate process under the hydrometallurgical processes, as this falls under leaching.
- The Expert Group agreed it is not necessary to include **solvent extraction** as a separate process under the hydrometallurgical processes, as this does not lead to a different Refinable.
- Currently the leaching residues and the precipitates are grouped together as **Sludges**. It was suggested to await the outcome of the composition exercise before deciding if a further split is needed.

- Based on the fact that we are focusing on the process description for SID, **Matte leaching residue** would be covered under the leaching residues / Sludges and no separate Refinable would be needed (if splitting is done by source, this should be done for all Refinables). It was suggested to await the outcome of the composition exercise before deciding if grouping is needed.

3.2. **Electrometallurgical processes and resulting Refinables**

- It was noted there is a simpler definition of electrochemical refining in the BREF. **AP7**
- It was questioned why we differentiate between Au and Ag electrolysis while we don't do this for other refining processes. For consistency, the Expert Group agreed to group Au and Ag electrolytes as '**Electrolytes, PM electrolysis**' and to group slimes from Au and Ag electrolysis as '**Slimes, PM electrolysis**'.
- Under the electrolytes, there may also be solutions from leaching; these may be considered as mixtures. **AP6**
- It was suggested to delete electrowinning from the process definitions document if no PMC Members perform this process resulting in substance > 1 t/a. **AP8**
- Electrodissolution is not performed by any PMC member.

3.3. **Pyrometallurgical processes and resulting Refinables**

- The Expert Group agreed on the definition of pyrometallurgical processes.
- It was suggested to put the Refinables 'Flue dust' and 'Materials for reclaim, precious metals in bricks, pots, crucibles and trays, etc.' (Refinable 9.2) as output of pyrometallurgical processes in general, as these cannot be further separated per process because physically collected and treated together.
- The Expert Group agreed to rename the process 'Calcining, roasting and incineration' in the decision tree to '**Thermal treatment**'. The proposed resulting Refinable 'Ashes' is however not a good name: '(enriched) residues from thermal treatment' was suggested instead. These are currently covered under 'Materials for reclaim, precious metals with or without support' (Refinable 9.1).
- **Fusion** can be embedded in 'Thermal treatment' if the description is broadened to cover reaction with a flux. When a flux is added, it is not actually melted completely so this would fit the description of thermal treatment.
- It was suggested to rename 'Concentrates' in the decision tree to '**Enriched phase**' and to add Fe and Cu bullion under the Enriched phases. These are currently under Doré, and splitting them up would reduce the composition range of Doré.

3.4. **Sources**

It was suggested to add a note to our internal SID document on how far we go back in the process to define the sources. **AP9**

4. **Next steps/actions to draft Refinables SID document**

Cf. Action list below.

5. **AOB, next meetings/calls and closing remarks**

- The Expert Group complemented Christoph Roehlich for the comprehensive process definitions document.
- The Expert Group agreed there is no need for a new meeting before the full WG meeting of 25 March.

Annexes

1. Agenda & list of participants
2. Slides presented at the meeting
3. ECHA information on SID and sameness of inorganic UVCB:
   - **3.1.** Background document for ECHA workshop on SID and sameness 6-7 Oct 2014 (ECHA, 17 Jul 2014)
   - **3.2.** Summary notes from ECHA workshop on SID and sameness 6-7 Oct 2014 (PMC and ECI, Oct 2014)
   - **3.3.** Appeal announcement & Board of Appeal decision Case A-008-2012
4. SID decision tree:
   - **4.1.** Part 1: Hydro-metallurgical processes
   - **4.2.** Part 2: Electro-metallurgical processes

4.3. Part 3: Pyro-metallurgical processes
4.4. Part 4: Sources

5. Overview of process and source descriptions PM Refinables (PMC, 27 Jan 2015)
6. Process definitions hydro-, electro- and pyro-metallurgical processes and reclaiming (C. Roehlich, 26 Jan 2015)

Actions

Table 1. Actions resulting from the 3 February PM Refinables Sameness Expert Group meeting in Brussels

	Action	Who?	Timeline
1.	Put speciation analysis in the Refinables 2016 contingency budget	PMC Sec (KA)	By mid-2015
2.	Composition exercise: identify the parameters allowing a structural representation of the PM slags and PM slimes and sludges, based on elemental composition and speciation	PMC Sec (KA)	By 20 Feb
3.	If composition exercise successful, check composition data gaps other Refinables and identify need for additional composition data collection	PMC Sec (KA)	By end Feb
4.	Additional composition data collection	PMC Sec (KA)	By end Mar
5.	Identify parameters allowing a structural representation of other Refinables	PMC Sec (KA)	By end Apr
6.	Consult SID guidance to check if liquid intermediates from PM refining can be considered mixtures	PMC Sec (FC/KA)	Done
7.	Check BREF for simpler definition electrochemical refining	D. Cholakova / C. Roehlich	By 13 Feb
8.	Confirm if electrowinning is performed resulting in substance > 1 t/a	Ref WG	By 15 May
9.	Add a note to our internal SID document on how far we go back in the process to define the sources (make proposal for agreement by the WG)	PMC Sec (FC/KA)	By end Apr
10.	Revise SID decision tree following comments made at the meeting	PMC Sec (KA)	By 13 Feb
11.	Revise process definitions document following comments made at the meeting	C. Roehlich	By 13 Feb
12.	Send comments on SID decision tree, process definitions document and composition exercise to PMC Sec	Sameness Expert Group	By 6 Mar
13.	Send SID decision tree, process definitions document and composition exercise to Ref WG for discussion/approval at 25 Mar WG meeting	PMC Sec (KA)	By 13 Mar
14.	Draft internal document Refinables SID approach	PMC Sec (FC/KA)	By end Apr
15.	Send comments on internal document Refinables SID approach to PMC Sec	Ref WG	By 15 May
16.	Finalise internal document Refinables SID approach for WG approval	PMC Sec (FC/KA)	By end May