MINUTES OF THE MEETING

1. Review of the substance profiles:

Table 1. Status of Silver substance profiles by 08/01/2008.

Material	Forms	Missing Information	Other remarks
Silver	Massive, grains, crystals and powders	- Some physico-chemical data* - PSD of some some powders - Uses**	Structural data is not required for Silver compounds. On-going samples identification.
Silver nitrate	Powder and in solution	- Tonnages*** - Some physico-chemical data* - PSD and granulometry data for powder forms - Uses**	Structural data is not required for Silver compounds. Sample identification close to finalisation.
Disilver oxide	Powder	- Some physico-chemical data* - Uses**	Structural data is not required for Silver compounds. Sample identification close to finalisation.
Silver carbonate	Powder	- None	Company can be requested to prepare sample
Silver sulphate	Powder	- None	Company can be requested to prepare sample
Silver intermediates	Substance profiles have not yet been prepared for silver intermediates. This action is subject to further discussion and clarification between the Trustee and relevant Member Companies.		

* Especially relevant for test samples.
** To be completed by each Member following circulation of complete profiles by mid-February.
*** To be extracted from main inventory; for confidentiality reasons, links from company(ies) to tonnage band(s) should be avoided. This applies to all silver materials.

2. Chase up of missing information:

a. Following the Assembly meeting, some companies have spontaneously completed their set of information and/or clarified that some information was in some cases simply not available to them. The profiles of these companies have been updated and will be sent to the each Responsible.

b. Some companies will be contacted individually in order to obtain specific missing information.

c. The Trustee will send a third and last request for information to the Consortium Members. Deadline to send final technical specifications and reports, studies, etc… on Silver will be set on 15th of February as agreed at Assembly meeting.

3. **Samples identification:** Representative samples of Silver powder, Silver nitrate crystal and Disilver oxide powder need to be identified based on several agreed criteria. These samples need to be selected amongst materials which are directly manufactured/imported in powder forms and not amongst materials which could contain inhalable fractions as contaminants within massive forms. The comparison will be organised in a tabular manner by the Trustee (Table 2). It is suggested to select a few number of applicable samples (1-2) of each powder in such a way that they can be used as reference samples for all enabling tests and, eventually, for the following testing steps of the Silver Project.

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a. Criteria:
   i. 1 ton/year threshold: at least 1 ton per year of the specific material must be manufactured/imported on the EEA;
   ii. Particle size: in order to select one or more representative samples for each applicable test, the particle sizes of the powder forms need to be known, listed and evaluated. The ranges to be considered are: sub-micron (nm) → respirable (up to 5µm) → inhalable (up to 100 µm, and including thoracic fraction (up to 50 µm)) → crystal → grain → massive.
   iii. Availability of technical specifications: as requested by EBRC and Euras, any sample sent to the Laboratories need to be accompanied by a complete identification and description of the sample. Member Companies having no technical specifications or incomplete information on their materials are unfortunately unlikely to fulfil this requirement and should therefore not be selected as sample providers.

b. Comparison table (cf. table 2):

Table 2. Comparison of powder and crystal forms of Silver, Disilver oxide and Silver nitrate materials of the Precious Metals Consortium.

Material/ Company	Form	Granulometry	PSD	Tonnage band	Other specifications
SILVER					
K	Powder of irregular shape	< 74 µm	D50 ~7 µm	1-10 tonnes	Surface area: ~1 m^2/g Relative density: 10,49 g/cm^3 Bulk density: < 1 g/cm^3 Water solubility: Not soluble Other solubility: Can be dissolved in nitric acid and is sensitive to sulphide.
K	Powder with dentritic shape	< 100 µm	D50 ~50 µm	10-100 tonnes	Surface area: 0,01 to 0,1 m^2/g Relative density: 10,49 g/cm^3 Bulk density: 1 to 4 g/cm^3 Water solubility: Not soluble Other solubility: Can be dissolved in nitric acid and is sensitive to sulphide.
P	Powder	Not available	Not available	10-100 tonnes	Wet powder/Sponge
C	Powder	Not available	Not available	1-10 tonnes	Not available
N	Powder 1	< 11 µm	D90 = 10,016 µm D50 = 3,282 µm D10 = 1,255 µm	10-100 tonnes	Specific surface area: 2,32 m^2/g Tap density: 3,5 ± 0,5 g/cm^3? Loss on drying:
N	Powder 2	< 9 µm	D10 = 1,119 µm D50 = 2,779 µm D90 = 8,004 µm	10-100 tonnes	Specific surface area: 2,67 m^2/g Tap density: 3,5 ± 0,5 g/cm^3? Loss on drying:
N	Powder 3	< 16 µm	D10 = 0,416 µm D50 = 1,301µm D90 = 15,308 µm	10-100 tonnes	Specific surface area: 8,38 m^2/g Tap density: 3,5 ± 0,5 g/cm^3? Loss on drying:
D	Powder	~ 14 µm	D10 = < 6µm D50 = < 15 µm D90 = < 55 µm	1-10 tonnes	Bulk density: 1,6 – 2,3 g/cm^3 Water solubility: insoluble
Z	Powder 1	1,5 – 2,5 µm	Not available	< 1 tonne	Relative density: 10,49 g/cm^3 Bulk density: 1,5 g/cm^3 +/- 1 Water solubility: Insoluble
Z	Powder 2	2,5 – 3,5 µm	Not available	< 1 tonne	Relative density: 10,49 g/cm^3 Bulk density: 1,5 g/cm^3 +/- 1 Water solubility: Insoluble
Z	Powder 3	4,5 – 6,5 µm	Not available	< 1 tonne	Relative density: 10,49 g/cm^3

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Material/ Company	Form	Granulometry	PSD	Tonnage band	Other specifications
					Bulk density: 1,5 g/cm³ +/- 1 Water solubility: Insoluble
Z	Powder 4	7,5 – 8,5 µm	Not available	< 1 tonne	Relative density: 10,49 g/cm³ Bulk density: 1,5 g/cm³ +/- 1 Water solubility: Insoluble
Z	Powder 5	8,5 – 9,5 µm	Not available	< 1 tonne	Relative density: 10,49 g/cm³ Bulk density: 1,5 g/cm³ +/- 1 Water solubility: Insoluble
Z	Powder 6	14 – 15 µm	Not available	< 1 tonne	Relative density: 10,49 g/cm³ Bulk density: 1,5 g/cm³ +/- 1 Water solubility: Insoluble
Z	Powder 7	0,8 – 2,0 µm	Not available	< 1 tonne	Relative density: 10,49 g/cm³ Bulk density: 1,5 g/cm³ +/- 1 Water solubility: Insoluble
Z	Powder 8	6 – 15 µm	Not available	< 1 tonne	Relative density: 10,49 g/cm³ Bulk density: 1,5 g/cm³ +/- 1 Water solubility: Insoluble
Z	Powder 9	0,7 – 1,3 µm	Not available	< 1 tonne	Relative density: 10,49 g/cm³ Bulk density: 1,5 g/cm³ +/- 1 Water solubility: Insoluble
Z	Powder 10	1,6 – 2,5 µm	Not available	< 1 tonne	Relative density: 10,49 g/cm³ Bulk density: 1,5 g/cm³ +/- 1 Water solubility: Insoluble
Z	Powder 11	1 – 4 µm	D50 = 2 µm	1 – 10 tonnes	Tap density 3.8 – 4.8 g/cm3 Water solubility: Insoluble
Z	Powder 12	0,030 – 0,10 µm	Not available	< 1 tonne	Relative density: 10,49 g/cm³ Bulk density: 1,5 g/cm³ +/- 1 Water solubility: Insoluble
Y	Powder with agglomerated/ dendritic shape 1	Not available	D50 15-25 µm Max 80%: < 36µm Max 35%: 36-63 µm Max 5%: 63-100 µm	1-10 tonnes	Bulk density: 1-1,6 g/cm³ Tap density: 2-2,5 g/cm³ Green density (50MPa): 5,6-6,5 g/cm³ Sintered density (900°C, 1h, air): > 9 g/cm³ Loss on ignition: < 0,1 %
Y	Powder with agglomerated/ dendritic shape 2	Not available	Max 90%: < 36µm Max 35%: 36-63 µm Max 5%: 63-100 µm	10-100 tonnes	Bulk density: 1-1,5 g/cm³ Tap density: 2-2,5 g/cm³ Sintered density (900°C, 1h, air): 9,3 g/cm³ Loss on ignition: < 0,1 %
Y	Powder with agglomerated/ dentritic shape 3	Not available	D10 = 2-5 µm D50 = 10-15 µm D90 = 30-35 µm	1-10 tonnes	Bulk density: 0,7-1 g/cm³ Surface area: 0,5-0,9 m²/g Loss on ignition (500°C/0,5 h): < 0,2 %
K	Grains	< 15 mm	Not available	100-1000 tonnes	Not provided
B	Grains	Not provided	Not provided	10-100 tonnes	
Z	Flake 1	Not applicable	Not applicable	1-10 tonnes	Not provided
Z	Flake 2	4.5 - 30µm	Not available	< 1 tonne	Relative density: 10,49 g/cm³ Bulk density: 1,5 g/cm³ +/- 1 Water solubility: Insoluble
SILVER NITRATE					
A	Crystal	Not available	50 %: 0,35-0,50 mm 30 %: 0,25-0,30 mm 20 %: < 0,25 mm	1-10 tonnes	Relative density: 4,35 g/cm³ Melting point: 212 °C
Z	Crystal/ Grain	< 3 mm	Not available	10-100 tonnes	Relative density: 4,35 g/cm³ Bulk density: 2,25 g/cm³ ± 0,25 Water solubility: 1 g in 0,4 ml
A	Solution	Not applicable	Not applicable	10-100 tonnes	Intermediate

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Material/ Company	Form	Granulometry	PSD	Tonnage band	Other specifications
N	Crystal	< 0,5 mm	D10 = 173,921 µm D50 = 328,811 µm D90 = 570,896 µm	100-1000 tonnes	Specific surface area : 0,023 m^2/g Water solubility at 20°C: 12 kg/l Relative density: 4,35 g/cm^3 Loss on drying: 0,05 %
C	Powder/Crystal	< 1 mm	D10: 231 µm D50: 367 µm D90: 468 µm	100-1000 tonnes	Water solubility at 20 °C: 12 kg/l Water solubility at 100 °C: 10,24 kg/l Relative density: 4,35 g/cm^3 Melting point: 210 °C Bulk density: 2000-2500 Relative density: 4,35 g/cm^3 pH (10 5w/w): 4-6
B	Crystal	Not provided	Not provided	1-10 tonnes	Not provided
K	Crystal	< 15 mm	Not available	1-10 tonnes	Not provided
DISILVER OXIDE					
Z	Powder 1	3,5 µm	D50 = 14 µm	< 1 tonne	0.7 g/cc density.
Z	Powder 2	20 µm	D50 = 19 µm	10-100 tonnes	1.2 g/cc density.
Z	Powder 3	50 µm	Not available	1-10 tonnes	Relative density: 7,22 g/cm^3 Bulk density: 0,75 g/cm^3 ± 0,25 Water solubility: 1 g in 40 l
Z	Slurry	Not applicable	Not applicable	10-100 tonnes	Intermediate
N	Powder	< 9 µm	D10 = 2,410 µm D50 = 4,692 µm D90 = 8,811 µm	10-100 tonnes	Specific surface area: 1,46 m^2/g Loss on drying: < 0,1 % Scott density: 0,4-0,8 g/cm^3 Tap density: 0,8-1,8 g/cm^3 Sieve size: > 98% passes 45 µm
C	Powder 1	< 45 µm	99 % < 45 µm D10= 16-31 µm D50= 7-18 µm D90= 2-8 µm	100-1000 tonnes	Bulk density: 1000-3000 kg/m^3 Density: ca. 7,2 g/cm3 Thermal decomposition: ≥ 170 °C
C	Powder 2	< 20 µm	99 % < 20 µm D10 = 11 µm D50 = 5,5 µm D 90 = 2,5 µm	100 – 1000 tonnes	Bulk density: 1000-3000 kg/m^3 Density: ca. 7,2 g/cm3 Thermal decomposition: ≥ 170 °C

4. **Impact of powder, crystal and grain forms' manufactured/imported volumes on REACH information/testing requirements:**
   a. Considering the fact that at least one company manufactures/imports Silver at more than 1000 tonnes/year on the EEA and that, in consequence, the master Registration Dossier for Silver will be based on Annex X information requirements, could some inhalation tests required in Annex X be waived based on the fact that the amount of inhalable fractions manufactured/imported on the EEA does not reach the same threshold and that, in consequence, there is less potential for exposure and lower information requirements should apply? Should this be valid, what is foreseen in the IT system to justify blanks in the Registration Dossier? Should a separate Registration of massive and powder forms be envisaged?
   b. All participants of the meeting are invited to find an answer to the above question. *The Trustee will contact Maren Bode (EBRC) and Joeri Leenaers (Eurométaux) for generic advice and will submit this question to the EChA.*

5. **Face-to-face meeting:** The upcoming face-to-face meetings are:
   a. 11 February 2008 (full day) 10:30 – 16:30 TAP + PM WG (+ Re M/I?) face-to-face meeting in Brussels.
   b. 12 February 2008 (am) 9:30 – 12:30: Second PM Refiners face-to-face meeting.
   c. 12 February 2008 (pm) 13:30 – 16:30: TAP + Safepharm/RCC face-to-face meeting.

6. **Silver project:**
   a. The Trustee has sent the confirmation letter for Phase IIa to EBRC and Euras on the 06/12/2007. The list of studies made available by three Member Companies to the Trustee will be sent to the consultants in order to be used in the second literature survey.
   b. Ames Goldsmith has kindly proposed to continue searching available data on silver and silver compounds in North America.
   c. The Trustee will contact KODAK to ask whether they would agree to have an independent consultant evaluating the three studies on silver chloride (although silver chloride is an intermediate only in our inventory, information on this compound might be used through read-across) before the PM Consortium actually purchases these studies from them.
   d. The Trustee will send confirmation letters for Phase IIb to EBRC and Euras indicating that the samples will soon be identified and sent to the consultants to proceed with the start of Phase IIb.

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