



22 April 2010 (10:30 - 15:30 CET)

MINUTES

1. Introduction and Welcome

- 1.1. **Confidentiality and Competition Law.** All participants committed to respect Confidentiality and Competition Law.
- 1.2. **Tour de table and apologies.** The list of participants is available in Annex 1. Due to the flight interruptions caused by the eruption of the Eyjafjallajökull volcano in Iceland, most participants were prevented from attending the meeting in person and had to participate by conference call instead. All handouts were sent by e-mail in advance of the meeting and presentations (Annex 2) were made available by GoToMeeting.
- 1.3. **Approval of the minutes of the last meeting (Reading, 29 Sep 2009).** *Cf. slide 4 of Annex 2.* The minutes were approved. Most of the actions agreed at that meeting were put on hold in order to prioritise the Ag and PM Refinables projects; some of these actions were discussed again today.
- 1.4. **Approval of the Agenda.** The Agenda (Annex 1) was approved.

2. PGM Project Development and Progress. *Cf. slides 5-10 of Annex 2*

- 2.1. **Overall project progress.** Phases I and II have been reported by WCA. Phase III will be launched as a result of the testing recommendations made by WCA in the Phase II reports and in agreement with the tiered approach proposed by the Secretariat. The aim of today's meeting is to agree on a priority testing strategy, launched with Transformation/Dissolution (T/D) and Classification, Labelling and Packaging (CLP) testing requirements.
- 2.2. **Project timeline towards registration deadlines.** The earliest registration deadline is January 2012; this may be adjusted due to Phase IV (preparation of Chemical Safety Reports) as PGM exposure or emissions monitoring data is not readily available and must be generated before the questionnaires are circulated. **AP1**

3. Proposed Lead Registrants (LR)

- 3.1. **First volunteers.** *Cf. slides 12-16 of Annex 2.* The proposed LR were supported by the PGM WG. **AP2** Close to 50% of PGM materials do not yet have a LR. **AP3**
- 3.2. **Declaration of commitment.** *Cf. slides 18-19 of Annex 2.* See Annex 3. **AP4**
- 3.3. **Reference samples and minimum substance identification requirements per registrant.** *Cf. slides 20-22 of Annex 2.* It was agreed to consider the Lead Registrant's sample as reference sample for the PGM testing programme, unless the Lead Registrant cannot provide such a sample (i.e. it is not readily available, not available in an isolated manner, or not "worst case" enough for some of the tests, e.g.: not the finest powder usually manufactured¹).

As regards purity, it was clarified that although 99,95% purity was the typical purity for Pt and Pd metals, for Rh, Ru and Ir the minimum purity level found on the market is 99,90%. **AP5**

It was furthermore clarified that the word 'sponge' should not be used when referring to PGM metal

¹ **Post-meeting note:** For some tests, the finest forms of PGM metals should be distinguished from coarser ones. In the case of Pt metal for instance, so-called "platinised Pt", "Pt sponge" and "Pt black" are known to express varying physico-chemical properties. Whereas platinised Pt presents a larger surface area, Pt sponge may vary in particle size and degree of sintering, Pt black is usually available with guaranteed specific surface areas of 24 to 29 m²/g.



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powders; such a term is associated with a specific manufacturing process (i.e. evaporation of PGM (chloro-salts to dryness, and calcination to PGM metals) which seems to be no longer applied in the PGM industry.

As regards substance identification, the PGM WG's recommendation for all PGM Members is to perform the following analysis on each on of their substances and intermediates being subject to joint Registration [AP6](#):

- PGM metals: ICP-MS or XRF + XRD + Particle size by laser diffraction + N-BET
- PGM solid compounds: ICP-MS or XRF + IR spectroscopy + XRD + Particle size + N-BET
- PGM solution compounds: ICP-MS or XRF + Raman spectroscopy

The above recommendation is in line with Eurométaux' recommendation too. For particle size determination, a tiered approach is proposed in Annex 4.

4. Phase II: category approach and testing recommendations

Cf. slides 23-27 of Annex 2. Now that the information available on each in-scope substance and intermediate has been evaluated by WCA, the preliminary categories that were originally built on the basis of the oxidation state of the PGM ion (e.g.: Pt 0, Pd 2+, Rh 4+, etc.) and the presence of any major counter-ion (e.g. ammine, ammonium, etc.) must be re-considered and where applicable, re-arranged to take account of water solubility (when available) and the presence of other influencing groups (e.g. organo-metallics). As regards the organo-PGM, the re-arrangement may result in the grouping of similar organic groups (e.g.: triphenylphosphine-type materials) across several PGM metals. [AP7](#)

5. Phase III: testing programme - proposed phased approach

Read-across, waiving and testing recommendations have been received by WCA for all PGM (Phase II draft reports). These testing recommendations have been summarised in a table per PGM family where physico-chemical, eco-tox and tox tests are shown separately. In addition, where applicable, the possibility of applying Annex III derogations was considered. It was recommended to spread the PGM project testing programme over more than one year, focussing on CLP testing requirements in 2010 and addressing REACH testing requirements as from 2011.

As regards CLP (*Cf. slides 31-34 of Annex 2*), five physico-chemical hazards must be assessed for all PGM (substances and intermediates, no matter the tonnage): flammability, explosive properties, self-ignition, oxidising properties and corrosivity to metals. These tests (except corrosivity) can be waived on the basis of melting and/or boiling point (*cf. Annex 5*) which means that where no information exists on these two parameters, any CLP test should be preceded by the determination of a melting and/or boiling point.

Assuming all tests are performed, the CLP testing programme alone could cost > 400 000 €. The relevance of certain of these five hazards is dependent on the composition and form of the material (*cf. Annex 6*). In order to waive any of the required tests, the PGM WG and WCA need to know:

- The composition of each PGM substance: the presence of certain groups can trigger the need to conduct or the possibility to waive a given test [AP8](#)
- The likely solubility or non-solubility of each PGM substance: insoluble or sparingly soluble compounds need to undergo a Transformation/Dissolution test in order to avoid a default Ecotox classification Cat. 4
- In which form(s) each PGM substance is manufactured and/or imported: anhydrous solid, hydrated solid, or solution (and the medium) (e.g.: it is assumed that a hydrated powder will not be flammable) [AP9](#)
- On which basis and facts the PGM industry experts can or not affirm that a given material is or not oxidising, flammable, corrosive, etc. [AP10](#)

Once the scope of the CLP testing programme, as well as the testing house and timeline ([AP11](#), [AP13](#)) are



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confirmed, Lead Registrants ([AP3](#)) will be invited to provide samples (*Cf. slides 41-42 of Annex 2*) for each test upon request by the Secretariat.²

T/D tests in particular (*Cf. slides 35-37 of Annex 2*) were deemed necessary for ten substances that were known to be insoluble or sparingly soluble and assumed to be manufactured in solid form by at least one Member of the PMC (hydrates being “worst-case” than anhydrous powders) [AP12](#)

The remaining physico-chemical and (eco-)tox testing programme of the PGM project (*Cf. slides 38-40 of Annex 2*) will be launched in Q1 2011, after Annex III derogations (*Cf. slides 43-51 of Annex 2*) are assessed more closely by WCA ([AP14](#)), Ganulometry information + exposure routes have been generated and discussed by the PGM WG ([AP6](#)) to allow WCA to refine its testing recommendation with the most adequate route of administration, and PMC has successfully submitted its 2010 Registrations Dossiers and CLP notifications.

Meanwhile, Johnson Matthey's Technology Centre has offered to carry out the water solubility testing for substances with a solubility > 10 mg/l (below this level, the OECD105 test is more complicated and it is recommended to carry out the solubility test at an external laboratory) and to publish the results in order to become available Klimisch 1 data. [AP15](#) Stability diagrams for each PGM (if they exist - [AP16](#)) can be used to determine the indicative solubility/dissolved species of each PGM compound.

6. Phase IV *Cf. slides 54-57 of Annex 2*

6.1. Update on uses, emissions and exposure questionnaire: form and scheduled timeframe. The PMC Secretariat has received a draft questionnaire from WCA, to which several comments were made to transform it into a more user-friendly tool. The PGM WG considered too premature to start circulating a questionnaire to gather monitoring data on PGM. The experience gathered with the Ag project showed that this exercise is very time-consuming for the Members, the Secretariat and the Consultants and that it cannot be accelerated. Not only are Members' resources fully dedicated to the preparation of 2010 Registration Dossiers and CLP notification but in addition, monitoring data on PGM is not likely to be readily available. It was agreed to:

- ☐ Launch a monitoring data request inviting all PGM Members to start monitoring the exposure to and emissions of PGM on their sites ([AP17](#))
- ☐ Discuss the most appropriate timeline for exposure and emissions data collection at the next PGM WG
- ☐ Circulate a questionnaire to collect all generated monitoring data not before 2011, after careful planning of the PGM project Phase IV

6.2. Preparation of CLP notification: flammability, explosive, self-ignition, oxidising properties. CLP notifications will be prepared by WCA in IUCLID 5.2. and submitted by each individual manufacturer as recommended by the PMC Secretariat³. *Cf. item 5 above and next PMC Plenary Meeting*

7. AOB, next meeting, and closing remarks

A conference call will be arranged ASAP to confirm the CLP + melting point + T/D testing programme. [AP18](#) The next meeting will be scheduled as soon as the time-plan of the CLP testing programme is confirmed; the aim of the next PGM WG meeting is to review the likely CLP classification of each PGM and prepare the next steps of the PGM project (REACH testing and Phase IV).

² **Post-meeting note:** It is proposed for the PMC to reimburse sample providers for the fraction of the sample that was spent or lost during the test + the fraction of the sample that was kept by the testing house as per GLP recommendations. The exact amount to be reimbursed by the PMC would be calculated by comparing the analysis of the original sample as sent to the testing house and the analysis of the sample as returned by the testing house multiplied by the LME cost applicable on the date of submission of the sample.

³ **Post-meeting note:** any difference in reported classifications may trigger a formal intervention from authorities who will seek harmonisation



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Annexes

1. Agenda and list of participants
2. Slides presented at the meeting
3. Declaration of commitment for PMC Lead Registrants
4. Tiered testing strategy for granulometry
5. Tiered testing strategy for physico-chemical hazards
6. Summary of PGM WG discussion on relevance of CLP tests
7. Request sent to representative PGM Members to clarify form of PGM

Table 1. List of actions agreed at the 22 April 2010 PGM WG meeting

	What?	Who?	By when?	Status by 12 May
1.	Monitor exposure to and emissions of PGM metals and compounds	All PGM Members	Jan 2011	Request in preparation
2.	Circulate names of proposed LR for approval by the PMC Assembly	CB	Jun 2010	
3.	Identify potential LR for remaining PGM materials	CB	Jun 2010	
4.	Send comments on Declaration of Commitment in advance of the PMC Plenary Meeting	All	Mid Jun 2010	
5.	Prepare ID Cards for PGM metals and compounds	Secretariat	Next PGM WG meeting	
6.	Launch proper identification of PGM substances and intermediates as per PGM WG recommendation	All	ASAP	
7.	Re-arrange PGM categories considering: ☐ PGM metal ion oxidation state ☐ Presence of major counter-ions ☐ Water solubility ☐ Presence of other influencing groups (especially organo-metallics)	WCA	Next PGM WG meeting	In progress
8.	Confirm CLP testing recommendations for each PGM based on the composition/presence of specific groups	WCA	Mid Jun 2010	
9.	Obtain confirmation from Members on the form(s) in which each PGM is manufactured and/or imported on the EEA (Annex 7)	CB	Mid Jun 2010	Survey launched
10.	Prepare CLP testing waiving statements on the basis of facts, by applying expert judgement	PGM WG	Mid Jun 2010	
11.	Confirm availability of PGM funds to conduct CLP tests in 2010 or foresee presentation and approval of additional budget at next PMC Plenary Meeting	CB	Mid May 2010	
12.	Confirm limits of detection available to CANMET and launch T/D tests on confirmed solid insoluble or sparingly soluble PGM to avoid ecotox cat. 4 default classification	CB + KR + WCA	Mid May 2010	Samples requested
13.	Obtain quotes from available (GLP-compliant) testing houses to start CLP tests on all PGM (and maybe also on Re, Au and PM CN- materials) in July 2010	WCA	Mid Jun 2010	In progress
14.	Re-assess testing recommendations in light of Annex III derogation potential and re-arranged PGM categories	WCA	Next PGM WG meeting	
15.	Prepare formal offer to conduct water solubility tests on PGM substances (including detailed testing protocol + clarification on testing method(s) that may "change" the nature of the PGM substance + list of substances with solubility > 10 mg/l)	DB	Next PGM WG meeting	
16.	Provide existing/available stability diagrams for PGM compounds to CB	DB	Next PGM WG meeting	Done
17.	Prepare and circulate PGM monitoring data request to all PGM Members (to be announced at PMC Plenary Meeting)	TH + DB	Mid May 2010	Request in preparation
18.	Organise conference call to confirm CLP+melting point+T/D testing programme with PGM WG and WCA	KR	Mid May 2010	