

## Chris Barrington

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**From:** Chris & Sue Barrington [ipia@pigiron.org.uk]  
**Sent:** 17 November 2009 07:43  
**To:** 'Adriano Clary'; 'Augusto Mendonca Lessa'; 'Erik Scholten'; 'Gerard Tor'; 'Hans Butter'; 'Harry Fisscher'; 'Joaquim Eleuterio'; 'Lee Preziosi'; 'Leonardo Wilken'; 'Magnus Tottie'; 'Nikolay Zabolev'; PEZENNEC Eric; Rob.Versfeld@corusgroup.com; 'Ronald Jonckbloedt'; 'Sue Hubbard'; 'Ursula Eriksson'; 'Yuri Mishin'  
**Cc:** 'Kevin.Jackson@corusgroup.com'  
**Subject:** Conference call minutes

All:

Herewith minutes of last Friday's conference call.

Present:

Rob Versfeld [RV, in the chair]  
Adriano Clary [AC, Vale]  
Armando Correa [ACo  
ArcelorMittal Research]  
Joaquim Eleuterio [JE  
ArcelorMittal Mines Canada]  
Ursula Eriksson [UE, LKAB]  
Sue Hubbard [SH, Rio Tinto]  
Yuri Mishin [YM, Metalloinvest]  
Eric Pezenne [EP, ArcelorMittal]  
Magnus Tottie [MT, LKAB]  
Chris Barrington [CB, Secretariat].

AGENDA ITEM	DISCUSSION	ACTION POINTS
1. Agreement on the agenda	The agenda as proposed by RV was adopted: <ol style="list-style-type: none"><li>1. Agenda approval</li><li>2. Minutes of previous meeting</li><li>3. Draft position paper about classification of pellets based on IMA work</li><li>4. Extra measurements [if needed]</li><li>5. Swerf / CLP [iron ore]</li><li>6. CSA/CSR: can we do without Exposure Assessment, as for sinter?</li><li>7. Next meeting</li></ol>	
2. Minutes of previous meeting	The minutes of the meeting held by conference call on October 1 <sup>st</sup> 2009 were approved. There were two matters arising: <ul style="list-style-type: none"><li>• RV advised that he had not prepared a paper on Exposure Assessment [EA] due to the development of the intended decision not to classify pellets [as Respirable Crystalline Silica (RCS) appears to be &lt;1% in all pellets]. In addition, no feedback on availability of exposure data had been received - which prompted the following:<ul style="list-style-type: none"><li>○ LKAB has exposure data for quartz, for both the pelletising plants and mines - a summary will be provided.</li><li>○ YM advised that Metalloinvest has data, but only in accordance with Russian standards - he felt that these data would not satisfy EU requirements.</li><li>○ EP advised that ArcelorMittal is doing EA work on its sinter plants in Europe, but wasn't sure what assessment, if any, had been done in connection with handling of pellets at ports and steel mills - he would check.</li></ul></li></ul>	<b>UE</b>  <b>EP</b>  <b>JE</b> <b>RV</b>  <b>AC</b>

	<ul style="list-style-type: none"> <li>○ JE said that he would check to see what data is available for ArcelorMittal Mines Canada .</li> <li>○ EP advised that ArcelorMittal has a template for collection of EA data - this will be circulated.</li> <li>• Corus had completed its test work per minute 6. The report will be circulated. The status of Vale's test work was not clear [AC had not joined the call at that point, but would be asked to provide an update]. It was agreed that Corus should submit its invoice [€4,500] for test work to the Iron Platform [and that Vale should do likewise when ready to do so].</li> </ul>	
3. Draft position paper	<p>RV went through the draft position paper on RCS which had been circulated with the agenda. In summary, all participants agreed with the conclusion of the paper:</p> <ul style="list-style-type: none"> <li>• Pellets in their natural state contain no RCS;</li> <li>• Even if pellet dust is taken into account, the proportion of RCS is below 1% and even below 0.1%, the threshold for carcinogenic classification.</li> </ul> <p>EP made the point that this conclusion needs to be supported by robust data taking into account the worst case scenario, including a justification of the particle size on which the analysis is based [60 µm in the draft paper]. This provoked a lengthy discussion about how to develop representative data that will stand up to scrutiny. Points of discussion were:</p> <ul style="list-style-type: none"> <li>• The tumble test might be a means of simulating pellet dust generation, although it does not represent a "natural" process as there is an element of grinding involved. One suggestion was that as continued tumbling eventually results in a limit to the amount of fines generated, an extension of the tumble test to the point of maximum fines generation might simulate a worst case scenario for dust content.</li> <li>• The proportion of fines contained in a typical pellet shipment seemed to be in the region of 2.5% [the sameness specification is &lt;5% below 5 mm] - if the approach is to sample pellet shipments, the question is how to achieve a representative sample, given the different pellet chemistries, production processes and materials handling systems, not to mention different handling systems at the various discharge ports. RV made the point that the draft position paper had been based on analysis of Corus pellets which are not representative of commercially traded pellets, being less strong as they do not have to withstand the same level of transportation and handling.</li> <li>• The point was made that the coating materials used for direct reduction [DR] grade pellets could also affect the RCS content - a variety of coating materials is used, including limestone. It was generally agreed that even taking into account the coating materials, the very low silica content of DR grade pellets is such that RCS should not be an issue.</li> </ul> <p>At CB's suggestion it was agreed to convene an experts group to study this matter and come up with a recommendation as to how to provide a basis for development of robust and representative RCS data for pellet dust. This group would comprise AC, ACo, MT and Gerard Tor of Corus under the moderation of RV [who will set up a conference call]. EP re-emphasised his point: the data must be robust, be based on good sampling and good analysis instead of a large quantity of tests and could be backed up by "weight of evidence" arguments - there do not appear to be any instances of RCS in pellets causing harm to humans.</p>	RV
4. Extra measurements	This issue was covered in the preceding agenda item.	
5. SWeRF / CLP for iron ore	<p>There had been some interaction with IMA and Ankerpoort's expert on SWeRF, but given the conclusion of the draft position paper, no further action had been taken. RV nevertheless agreed to circulate the slides from the IMA SWeRF workshop held on October 30<sup>th</sup> 2009.</p> <p>RV noted that it is possible that SWeRF will have more relevance for the CLP</p>	RV

	hazard assessment for iron ore [which will be carried out by the Iron Platform for the iron ore industry]. SH had been asked to draft this paper and agreed to do so, but starting with a statement of the issues to be considered [this initial paper will be available in about one week]. SH referred to an ICM project on CLP assessment of ore and concentrates - something from this might be available the following week.	SH
6. CSA/CSR	There was not much discussion of this item - Corus is in the process of drafting the paperwork for sinter. It was felt that the background paper on process description for pellets would need to be more detailed than that for sinter [RV had circulated a Corus paper on Sinter Process and Uses]. Referring to the draft position paper on pellets and RCS, both ACo and CB commented that the text under the heading "Forms of physical states in which iron pellets are placed on the market" could be improved - both offered to suggest how these paragraphs could be re-drafted.	ACo, CB
7. Next meeting	This was fixed [conference call] for Friday December 11 <sup>th</sup> at 15.00 hrs CET, 14.00 hrs GMT.	

I have email problems at the moment, so please address any comments to an alternative email address:  
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Best wishes

**Chris Barrington**

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