



**NOTE on  
the 93<sup>rd</sup> meeting  
of the Scientific Committee  
on Occupational Exposure Limits**

**24–25 September 2014  
EUFO - Conference Room  
L-2920 Luxembourg  
(Gasperich)**

## LIST OF PARTICIPANTS

Prof. H. M. BOLT  
Dr. D. BRUNET  
Dr. E. DĂNULESCU  
Prof. H. GREIM  
Prof. A. HARTWIG  
Dr. M. HORNYCHOVÁ  
Prof. G. JOHANSON  
Prof. D. LISON  
Prof. R. MASSCHELEIN  
Dr. E. MIRKOVA  
Dr. G. NIELSEN  
Dr. E. POSPISCHIL (1<sup>st</sup> day)  
Dr. T. SANTONEN  
Dr. J. SKOWROŃ  
Dr. R. WOUTERSEN

*Absent:*

Prof. A. HAY  
Prof. L. LEVY  
Dr. H. NORPPA

### Commission

Ms. N. CAVALLE OLLER (DG EMPL/B3)  
Dr. A. EFTIMIE  
Mr. D. PAPAMELETIOU (JRC-ISPR/CAT)  
Ms. G. LUVARA (DG ENTR)

*Absent:*

Ms. K. GRODZKI (DG EMPL/B3)  
Mr. A. MORRIS (DG EMPL/B3)

### ECHA-RAC

Mr. T. BOWMER

### Observers

Dr. H. JOHNSEN (EFTA)  
Dr. M. KOLLER (EFTA)

### Invited experts

Prof. E. HENRY (Université Paris-Dauphine)  
Dr. J. JÄRNBERG (Swedish Work Environment Authority)

<b>1.</b>	<b>Opening of the meeting by the Chair</b>
1.1	<b>Adoption of the agenda</b> The agenda was adopted.
1.2	<b>Conflicts of interest</b> The Chairman requested members to indicate whether any of the agenda items presented a conflict of interest. No new potential conflicts of interest were reported.
1.3	<b>Adoption of the draft note of the 92<sup>nd</sup> meeting</b> The note of the 92 <sup>nd</sup> SCOEL meeting was adopted and will be published.
1.4	<b>Invited guests</b> Prof. Henry and Dr. Järnberg were welcomed.
<b>2.</b>	<b>General information: Commission activities relevant to the work of SCOEL</b>
2.1	<p><b>SCOEL issues</b></p> <p><b>a. Renewal of term of office</b> The open call for expression of interest that will be launched to select members for the next term of office will be open for 8 weeks. SCOEL will be informed when it has been published in the <i>Official Journal</i>.</p> <p><b>b. Appointment of a new scientific secretary</b> The post had been advertised as a permanent position and the selection of a candidate had reached an advanced stage.</p> <p><b>c. Publication of the list of SCOEL recommendations on biological values</b> The list of recommended biological values had been published on the SCOEL website. The possibility to incorporate these values into OSH legislations was discussed. There was a general discussion on possible changes to EU OSH directives and the interface with REACH</p> <p>In this context, SCOEL was informed about a new Commission initiative led by DG Research and Innovation aiming at finding a common approach and a better coordination of human health biomonitoring.</p> <p><b>ACTION: DG EMPL to keep SCOEL updated about the progress of these issues.</b></p>
2.2	<p><b>OSH-REACH interface</b></p> <p><b>a. Discussion on SCOEL/RAC risk assessment approaches</b> See item 8.2.</p> <p><b>ACTION: DG EMPL to continue the discussions with DG ENTR and DG ENV on the interface between the legislations. Invite ECHA/RAC representatives to the next SCOEL meeting.</b></p> <p><b>b. Workshop Brussels, 18 November 2014</b> The workshop on the OSH/REACH interface will take place on 18 November in Brussels with the morning session involving national authorities only, and the afternoon session with stakeholders such as industry, employers and scientific experts including SCOEL. The SCOEL involvement was organised. Provisionally, four members will attend and present the use of uncertainty factors as used by SCOEL.</p> <p><b>ACTION: DG EMPL and SCOEL to provide feedback at the next meeting (item 2).</b></p>
2.3	<p><b>JRC Scientific support</b></p> <p><b>a. Progress Report Administrative Arrangement 2 (AA2)</b> <i>Criteria documents prepared by external contractors (isocyanates, diesel exhaust and</i></p>

	<p><i>aviation fuels</i>): The work is progressing according to plan. The previously mentioned workshop on combustion products from aviation fuels is foreseen during the first half of 2015.</p> <p><i>Scoping studies</i>: For the work on <i>rubber fumes</i>, a technical working group meeting with the external co-authors and an external evaluator had been held on 23 September. This highly complex issue will be reviewed in a mainly strategic document summarising the present state of knowledge and critical issues. The study report will be presented at the next SCOEL meeting.</p> <p>The <i>poor solubility low toxicity (PSLT)</i> expert survey on dose metrics had been carried out. The results will be circulated for the next meeting.</p> <p><i>Summary documents (SUMs) (arsenic, benzene, cobalt and bitumen/asphalt) to be prepared in-house</i>: Progress is according to plan. Revised version of drafts on cobalt and arsenic had been circulated before this meeting.</p> <p><b>b. Identifying priorities for Administrative Arrangement 3 (AA3)</b>          Some AA3 priorities may result directly from the current work programme (AA2). As stated at the last meeting, this includes PSLT, the aviation issues, benzene, asphalt/bitumen, and cobalt and compounds with the latter being split into two reports with hard metal cobalt associated with tungsten carbide in a separate evaluation.</p> <p>Preliminary ideas for new scoping studies were a biomonitoring concept study, containers in customs, and occupational exposure from public transportation systems.</p> <p><b>ACTION: To be further elaborated by the JRC and DG EMPL (item 2).</b></p>
<p><b>3.</b></p>	<p><b>SCOEL Recommendations: Candidates for final adoption</b></p>
<p>3.1</p>	<p><b>Di-<i>n</i>-butyl phthalate</b> (SCOEL/SUM/143) (CAS No: 84-74-2)          A revised version and reply letter had been drafted. Comments received during the consultation included the use of allometric scaling, and whether the recommended OEL based on respiratory tract irritation is protective enough for long-term effects. The comments had been taken into account in the revised version, except the principle of allometric scaling, which was first to be discussed in plenum (item 4). It was agreed to apply it in the case of di-<i>n</i>-butyl phthalate and in doing so recalculate from 7 days oral exposure to 5 days inhalation exposure. Some newer additional biomonitoring data should be incorporated. If the overall recommendation is left unchanged, the draft Recommendation was considered adopted with the suggested editorial changes. Otherwise, it will be re-discussed at the next meeting.</p> <p><b>ACTION: Prepare for publishing or present a revised version and reply letter at the next meeting (item 3).</b></p>
<p>3.2</p>	<p><b>Phosphoryl trichloride</b> (SCOEL/SUM/181) (CAS No: 10025-87-3)          Some improvements had been made as a result of comments received during the consultation. Some additional minor changes were suggested. The draft Recommendation and the reply to the contact points were adopted.</p> <p><b>ACTION: Revise, edit and publish the Recommendation on the website and send the replies to the contact points.</b></p>

3.3	<p><b>Cumene</b> (SCOEL/SUM/29) (CAS No: 98-82-8)                  The last date for the external consultation was 1 September, which had not allowed sufficient time to revise the draft. The discussion was therefore postponed for a future meeting.</p> <p><b>ACTION: Present a revised draft and a draft reply at the next meeting (item 3).</b></p>
3.4	<p><b>Aniline</b> (SCOEL/SUM/153) (CAS No. 62-53-3)                  Comments received were discussed. The approach to derive at the recommended biological limit value (BLV) from the human urinary excretion data was further discussed. It was agreed to re-calculate the BLV, which necessitates a second external consultation period.</p> <p><b>ACTION: Revise, edit and send the addendum for a 4-week consultation to the contact points for a renewed discussion at the next meeting (item 3).</b></p>
<p><b>4. Review of methodological issues</b></p>	
4.1	<p><b>SCOEL Rules of Procedure</b>                  The discussion was postponed for a future meeting.</p> <p><b>ACTION: The discussion to be continued at a future meeting (item 4).</b></p>
4.2	<p><b>Key Documentation (possible need for revision)</b></p> <p><b>a. Principal discussion on the use of allometric scaling</b>                  The allometric scaling approach was presented and discussed in principle and with di-n-butyl phthalate as an example (item 3.1). It was agreed that allometric scaling should be applied provided that the parent substance is toxic by itself. The assumed fraction of absorption in the absence of data should be discussed case by case. It was further suggested to correct for differences in exposure duration. It was decided to incorporate the suggested changes in the Key methodology document for a continued discussion at the next meeting.</p> <p><b>b. Ceiling values and default STEL values</b>                  The proposed text on ceiling values and STEL values were discussed. Some minor revision was suggested, to be followed-up at the next meeting.</p> <p><b>ACTION: Present a revised Key documentation at the next meeting (item 4).</b></p>
<p><b>5. SCOEL draft Recommendations: after consultation with the contact points</b></p>	
5.1	<p><b>Chloromethane</b> (SCOEL/SUM/191) (CAS No: 74-87-3)                  The last date for the external consultation was 15 September, which had not allowed sufficient time to revise the draft. The discussion was therefore postponed for a future meeting.</p> <p><b>ACTION: Present a revised draft and a draft reply at the next meeting (item 3).</b></p>
5.2	<p><b>Hexachlorobenzene</b> (SCOEL/SUM/188) (CAS No: 118-74-1)                  Comments received during the consultation were discussed and especially the need for a skin notation. It was decided to clarify this issue by incorporating the ECETOC criteria and more transparently compare the dermal absorption with the inhalation uptake corresponding to the recommended BLV.</p> <p><b>ACTION: Present a revised draft and a draft reply at the next meeting (item 5).</b></p>

5.3	<p><b><i>n</i>-Butyl acetate, sec-butyl acetate, isobutyl acetate</b> (SCOEL/SUM/184) (CAS No: 123-86-4, 105-46-4, 110-19-0) The draft Recommendation had been revised considering external comments received. Some remaining uncertainties were addressed with particular attention paid to the justification of the STEL. The draft was to be revised accordingly and the discussion continued at the next meeting.</p> <p><b>ACTION: Present a revised draft and a draft reply at the next meeting (item 5).</b></p>
5.4	<p><b>Isoamyl alcohol</b> (SCOEL/SUM/177) (CAS No: 123-51-3) Comments received during the consultation period were carefully discussed. It was noted that no new facts had been presented that would support a revised conclusion. It was therefore agreed that the SCOEL derivation of the recommended limit value should remain, and the draft otherwise revised in accordance with the discussion.</p> <p><b>ACTION: Present a revised draft and a draft reply at the next meeting (item 3).</b></p>
<p><b>6. SCOEL draft Recommendations: before consultation with the contact points</b></p>	
6.1	<p><b>Trimethylamine</b> (SCOEL/SUM/179) (CAS No: 75-50-3) A revised version was discussed. It was decided to circulate the AIHA workplace data as well as the key animal data for the next meeting for a continued discussion on how to best use the meagre data base to derive a recommended OEL.</p> <p><b>ACTION: Present a revised draft at the next meeting (item 6).</b></p>
6.2	<p><b>tert-Butyl acetate</b> (SCOEL/SUM/187) (CAS No: 540-88-5) The document had been revised as previously discussed and new reproductive toxicity data included. The overall assessment of the data base was discussed and it was agreed to revise the derivation of the recommended OEL and STEL. It was suggested to use the inhalation data in mice to derive a provisional OEL to be further discussed at the next meeting. For the STEL, a value in analogy with the other butyl acetates was proposed.</p> <p><b>ACTION: Present a revised draft at the next meeting (item 6).</b></p>
6.3	<p><b>Beryllium and beryllium compounds</b> (SCOEL/SUM/175) (CAS No: 7440-41-7) The draft Recommendation had been revised according to the discussion at the last meeting. It was agreed to revise the argumentation for the recommended OEL starting with an approximate lowest effect level for total dust based on the whole body of data and to finally present arguments on which sampling fraction to use.</p> <p><b>ACTION: Present a revised draft at the next meeting (item 6).</b></p>
6.4	<p><b>Formaldehyde</b> (SCOEL/SUM/125) (CAS No: 50-00-0) The revised draft addendum was discussed in depth. It was suggested to elaborate some study descriptions, to clarify the interpretation of the results from the embalmer studies regarding systemic genotoxicity and to revise the overall interpretation of the lowest effect level in the human volunteer studies.</p> <p><b>ACTION: Present a revised draft at the next meeting (item 6).</b></p>
6.5	<p><b>Zinc and inorganic compounds</b> (SCOEL/SUM/63) (CAS No: 7440-66-6) Postponed to a future meeting.</p> <p><b>ACTION: Present a revised draft at the next meeting (item 6).</b></p>

6.6	<p><b>Diethyl and dimethyl phthalates</b> (SCOEL/SUM/190) (CAS No: 131-11-3) Postponed to a future meeting.</p> <p><b>ACTION: Present a revised draft at the next meeting (item 6).</b></p>
6.7	<p><b>Asbestos</b> (SCOEL/SUM/192) To initiate a comprehensive discussion, it was agreed to invite Dr. Bernstein to the next meeting to give a presentation on the asbestos issue and the development in the field. Later, an epidemiologist may also be consulted.</p> <p>Some members stressed the importance of dealing with this matter in a pragmatic way, i.e. to consider mixed exposure to both chrysotile and amphibole.</p> <p><b>ACTION: Invite Dr. Bernstein to attend the next meeting (item 6)</b></p>
6.8	<p><b>Toluene</b> (SCOEL/SUM/18) (CAS No: 108-88-3) A revised version was discussed and in particular the data on colour vision effects, neurotoxicity and ototoxicity.</p> <p>It was decided to elaborate on the descriptions of the critical studies on colour vision and hearing impairment, to consider including some mechanistic data on hearing impairment from solvent exposure and present a revised draft at the next meeting. Key documents/papers on ototoxicity and its mechanisms should be circulated in advance.</p> <p><b>ACTION: Present a revised draft at the next meeting (item 6).</b></p>
6.9	<p><b>Hydrogen sulphide</b> (SCOEL/SUM/124) (CAS No: 7783-06-4) The need for and the possibility to recommend a ceiling value was discussed, and the appropriate level for such a value. It was suggested to put forward a recommended ceiling value justified by the occurrence of olfactory fatigue and supported by the absence of effects in animal studies at the suggested level.</p> <p><b>ACTION: Present a revised draft at the next meeting (item 6).</b></p>
6.10	<p><b>Arsenic</b> (No SUM) (CAS No: 7440-38-2) The issue was briefly discussed, but a more in-depth discussion was postponed for the next meeting, when a more complete and updated draft, especially regarding exposures (background and occupational), measurement methods, biomonitoring and risk estimates will be available to enable a derivation of a recommended biological value.</p> <p><b>ACTION: Present a revised draft at the next meeting (item 6).</b></p>
6.11	<p><b>Hydrogen peroxide</b> (SCOEL/SUM/134) (CAS-No: 7722-84-1) Postponed to a future meeting.</p> <p><b>ACTION: Present a revised draft at the next meeting (item 6)</b></p>
<b>7.</b>	<b>SCOEL draft Recommendations: preliminary discussion</b>
7.1	<p><b>Respirable crystalline silica (RCS)</b> (SCOEL/SUM/94) Postponed. A first draft addendum is expected at the next meeting.</p> <p><b>ACTION: Present a first draft addendum at the next meeting (item 7).</b></p>
7.2	<p><b>Styrene</b> (SCOEL/SUM/176) (CAS No: 100-42-5) A discussion on how to proceed with this issue was postponed to the next meeting.</p> <p><b>ACTION: Present a first draft at the next meeting (item 7).</b></p>

7.3	<p><b>n-Butanol</b> (SCOEL/SUM/188) (CAS: 71-36-3)                  Postponed to a future meeting.  <b>ACTION: Present a first draft at the next meeting (item 7).</b></p>
7.4	<p><b>Lead</b> (SCOEL/SUM/83) (CAS No: 7439-92-1)                  Postponed. A first draft is expected at the next meeting.  <b>ACTION: Present a revised draft at the next meeting (item 6).</b></p>
7.5	<p><b>Benzene</b> (SCOEL/SUM/140) (CAS-No: 71-43-2)                  Postponed. A first draft is expected at the next meeting.  <b>ACTION: Present a revised draft at the next meeting (item 6).</b></p>
7.6	<p><b>Bitumen/asphalt</b> (SCOEL/SUM/195)                  No draft Recommendation was available but a brief report was given on the progress since the last discussion in SCOEL. A first draft will be presented at the next meeting with particular attention given to definitions and measurements of bitumen.  <b>ACTION: Present a first draft at the next meeting (item 6).</b></p>
7.7	<p><b>Cobalt and cobalt compounds</b> (SCOEL/SUM/194) (CAS-No: 7440-48-4)                  An overall picture of the database and intended strategy was presented. Some new data and documentation had been provided by different stakeholders. It was decided that cobalt associated with tungsten carbide will be the subject of a separate paper. A first draft Recommendation is expected at the next meeting.  <b>ACTION: Present a first draft at the next meeting (item 6).</b></p>
7.8	<p><b>Dinitrotoluenes</b> (SCOEL/SUM/196) (CAS-No: 121-14-2, 606-20-2)                  A first draft had been prepared, but any major discussion was postponed due to time constraints. The possibility to recommend a biological guidance value was to be further explored till the next meeting.  <b>ACTION: Present a first draft at the next meeting (item 6).</b></p>
7.9	<p><b>Diesel engine exhaust</b> (SCOEL/SUM/198)                  The JRC report was presented and accepted. A SCOEL rapporteur was appointed to carry on the work and to draft a Recommendation. Issues such as the differences between exhaust from the old and new technologies (both of which should be covered in the evaluation), including particle size distributions and mechanisms for genotoxicity/carcinogenicity were briefly discussed.  <b>ACTION: Present a first draft at the next meeting (item 6).</b></p>
7.10	<p><b>Diisocyanates</b> (SCOEL/SUM/197)                  Postponed. A first draft is expected at the next meeting.  <b>ACTION: Present a first draft at the next meeting (item 6).</b></p>
<b>8.</b>	<b>SCOEL Recommendations: miscellaneous issues</b>
8.1	<p><b>Carbon monoxide</b> (SEG/SUM/57) (CAS No: 630-08-0)                  An overview of the data on ototoxic effects of carbon monoxide was given. The discussion – especially how to evaluate low-dose human data - will be continued at the next meeting with key data and other relevant background information being circulated in advance. It was also agreed to check generally if new data are available and if the arguments for the</p>

	<p>recommended OEL of 20 ppm from 1995 are still valid.</p> <p><b>ACTION: Give an updated report at the next meeting about the need for a general update (item 8).</b></p>
8.2	<p><b>N-methyl-2-pyrrolidone (NMP)</b> (SCOEL/SUM/119) (CAS No: 872-50-4)                  A comparison between the SCOEL (2007) and RAC assessments of NMP were presented and discussed. It was decided to prepare an addendum to SUM 119 explaining the SCOEL procedure to derive the recommended OEL, highlighting the main divergences between the SCOEL and RAC procedures, and including a clarification regarding the margin of safety between the no-effect level for reproductive toxicity and the recommended OEL.</p> <p><b>ACTION: Prepare a draft addendum at the next meeting (item 7).</b></p>
8.3	<p><b>Azodicarbonamide (ADCA)</b> (CAS-No: 123-77-3)                  The issue has been put on hold as decided at the previous meeting.</p> <p><b>ACTION: Await the MAK document before deciding how to proceed (item 8).</b></p>
8.4	<p><b>4-Aminotoluene</b> (SCOEL/SUM/145) (CAS-No: 106-49-0)                  A Recommendation had been drafted, but as the risk assessment of this substance is linked to that of aniline, which is to be sent for a 2<sup>nd</sup> consultation (item 3.4), the discussion was postponed till the next meeting.</p> <p><b>ACTION: Present at the next meeting a draft in accordance with the revised aniline draft (item 6).</b></p>
8.5	<p><b>Platinum</b> (SCOEL/SUM/150) (CAS-No: 7440-06-4)                  Postponed awaiting new data.</p> <p><b>ACTION: Put on-hold awaiting new data (item 8).</b></p>
8.6	<p><b>Naphthalene</b> (SCOEL/SUM/90) (CAS-No: 91-20-3)                  The issue was postponed till the next meeting. Any new scientific data on naphthalene that might motivate a toxicological re-assessment of this chemical by SCOEL was to be consulted and discussed at the next meeting.</p> <p><b>ACTION: Present any new scientific data on naphthalene (item 8).</b></p>
8.7	<p><b>Calcium oxide and calcium hydroxide</b> (SCOEL/SUM/137)(CAS No: 1305-78-8, 1305-62-0)                  The issue was postponed till the next meeting due to time constraints.</p> <p><b>ACTION: Present background information as needed for the next meeting (item 8).</b></p>
8.8	<p><b>Analytical measurement of nitrogen dioxide</b> (SCOEL/SUM/53)                  Some input from stakeholders on the newly adopted Recommendation on nitrogen dioxide was discussed. A reply letter had been drafted in response to an inquiry regarding measurements of nitrogen dioxide in underground mining. Further input from stakeholders was presented by DG EMPL. Any scientific concerns would be looked at and re-discussed at the next meeting.</p> <p><b>ACTION: Send the reply letter, address any additional input on the scientific evaluation to be re-discussed at the next meeting (item 8)</b></p>

<b>9.</b>	<b>SCOEL administrative management issues (chair, vice-chairs, COM and former scientific secretary)</b>
9.1	<p><b>a. Preparing for the hand over to the next term of office</b> Key issues important for a smooth transition between the present and next committee were discussed.</p> <p><b>b. Preparing for a new Scientific Secretary and new administrative support</b> Practical matters to ensure continuity at the change of secretarial staff were briefly discussed.</p> <p><b>c. Evaluation of the JRC Administrative Arrangement No. 2 and preparing for Administrative Arrangement No. 3.</b> Results and lessons learnt from the present administrative arrangement and implications for the next administrative arrangement were discussed.</p> <p><b>ACTION: DG EMPL to consider the aspects discussed for the future management of SCOEL.</b></p>
<b>10.</b>	<b>Meetings in 2014 and 2015</b>
	<p>3–4 December 2014 18–19 March 2015 10–11 June 2015 23–24 September 2015 9–10 December 2015</p>
<b>11.</b>	<b>Other business</b>
	None.