

# **EUROPEAN COMMISSION**

DIRECTORATE-GENERAL FOR ENERGY AND TRANSPORT

DIRECTORATE H - Nuclear Energy Radiation Protection

# Meeting of the Group of Experts (GoE) referred to in Article 31 of the Euratom Treaty

# Luxembourg, 16 – 18 October 2006

# **SUMMARY REPORT**

(Approved by the Group of Experts at the meeting 12 – 13 June 2007)

#### GENERAL

In his introduction the Chairman welcomed the participants.

In a general discussion the GoE claimed that the working conditions for the GoE are still unsatisfactory because of several documents provided too late. The Chairman and the Commission observed that this time the meeting was held much earlier after the summer break than usually because of the time frame for the submission of comments on the new draft ICRP Recommendations. Therefore the Working Parties could not finalise their contributions until just before the meeting. It was also noted that the Summary Report was delivered well in time.

In addition, the GoE criticised particularly that the invitations to the Scientific Seminar came by far too late. The GoE recognised and underlined that the secretariat was not responsible for the late invitations.

The GoE addressed the role of the GoE versus the AQG, and the role of the Commission when represented in international committees and meetings. In addition, it was discussed how decisions of the GoE were being reached; one member asked for minority views to be reflected in the Summary Report.

The Chairman recalled that vote recording was not within the traditions of the GoE but agreed to a further discussion of this issue. The current rules of procedure only foresee the record of dissenting opinions with decisions on final documents, such as Opinions.

The Chairman informed the group about the meeting of the STC where he presented the activities of the GoE. He confirmed that the exchange of information between the GoE and the STC is beneficial for both sides.

# 1. AGENDA ITEM 1: APPROVAL OF THE AGENDA

The agenda was approved.

# 2. AGENDA ITEM 2: SUMMARY REPORT OF THE MEETING HELD IN LUXEMBOURG ON 20-21 JUNE 2006

The GoE approved the Summary Report with some changes.

At one point of the Summary Report an extensive discussion about the format of the report took place. In particular, it was discussed whether diverging opinions should be displayed in the report. Finally, the GoE concluded that the report will not mention the names of Experts offering specific views. Diverging opinions shared by a number of experts would continue to be phrased in a balanced way.

The Summary Report was approved with some changes under the condition to discuss the format of the report again at the next meeting of the GoE. In this context the chairman and the co-chairperson will liaise before the next meeting.

#### 3. AGENDA ITEM 3: PROGRESS REPORTS IN VIEW OF REVISION OF THE BSS

#### 3.1. WP BSS

General discussion

The mandate/mission of the WP BSS was discussed along the lines laid down in the document presented to the GoE.

The GoE adopted the mandate/mission and agreed that the WP BSS now has essentially a coordination function. By the time of the actual drafting of the new BSS, the Working Party could have a more active role.

# 3.1.1. Comments to ICRP

On 11 September 2006, the Commission sent a collection of editorial comments, including comments by individual Experts, by the Working Party on Medical Exposures and by the Commission, to the ICRP to meet the deadline of 15 September 2006.

The GoE further discussed the draft of ICRP and the discussion revealed that some comments had not been transmitted with sufficient precision. This will be corrected.

In addition, the secretariat proposed to send further documents to the ICRP addressing the issues "Constraints", "Scope of Regulatory Control", and "Definitions". The EC recommended not re-drafting these documents, unless there were any major points, because of the urgency. The documents can be sent on behalf of the EC without full endorsement by the GoE.

# 3.1.2. Note on Scope of Regulatory Control

The EC introduced the issue explaining that this note reflected the earlier criticism on the draft ICRP document on the issue, as a positive contribution to the new ICRP recommendations. The definition of regulatory control and the philosophy of exemption and clearance were addressed, while avoiding the need to use the concept of exclusion.

In the discussion the GoE recommended a few editorial corrections.

The GoE concluded that the document will be sent on behalf of the EC to the ICRP.

# 3.1.3. Note on Definitions

The EC presented the document and underlined the need for a good definition of "Practice". Further addressed were the definitions "Endeavour", "Practice/Intervention", "Employer" (especially in the context of the Outside Workers Directive), "Undertaking", the concept of "Members of the Public" and "Workers", etc..

The extended discussion dealt with the details of editorial improvements. It was proposed to check the definitions from a legal perspective.

The document was considered not to be very relevant to the new ICRP Recommendations, but it should be sent to the ICRP with a note of caution. On the other hand, with respect to the IAEA BSS, the paper is more important and should be therefore sent to the IAEA on behalf of the EC with mention of the discussion in the GoE. It should be emphasised that the definitions would need to be reviewed together with the overall BSS; nevertheless the new definitions, while not fully mature, may help understanding better the new developments.

# 3.1.4. Note on Constraints

The EC presented the document "Note on Constraints" which provides additional considerations on the concept of constraints as a prerequisite/starting point for optimisation. The EC underlined that the use of the same concept for three different situations, planned, existing and emergency, is not straightforward and would profit from better explanation.

The GoE discussed in detail the concept and recognised that in its present formulation by ICRP it is a source of confusion and needs to be better explained. The GoE agreed that the "Note on Constraints" should contribute to the clarification of the concept in the ICRP Recommendations.

The EC will send the document with minor corrections to the ICRP.

# 3.2. WP NORM

# 3.2.1. Final WP Report

The chairman of the WP NORM presented the work of the WP (see distributed presentation and the related document) and introduced a list of industries, (with possibility for MSs to add specific industries), a generic level for the control of NORM industries, the Graded Approach for Occupational Exposure, and the common approach for discharges (with the difficult issue of dilution). He briefly presented the future work with regard to construction products, and announced that the meeting of the WP in November will start dealing with radon.

The GoE acknowledged the excellent work and thanked the WP.

The GoE then discussed in detail the elements of the report. In particular, the proposed decision threshold of 1 Bq/g was extensively discussed, also in the context of a lower value of 0.2 Bq/g proposed for construction materials or for

unconditional clearance in order to ensure that doses are in all cases kept below 1 mSv. The GoE underlined the importance of international harmonisation and a close cooperation with the IAEA.

In conclusion, the GoE stated that further in-depth discussion is needed to complete the report. The EC emphasised that the provisional conclusions of the WP still had to be put in perspective to the overall BSS; the absence of an overall framework may be cause of some of the divergent points of view.

# 3.2.2. Radon issue

The EC presented the outline of a work program, while emphasising that the immediate objective was to provide input for the BSS, not to address Radon in general.

In discussion, the GoE addressed specific items such as the inclusion of spas and caves, the harmonisation for public buildings, and mapping of radon concentration (the JRC is dealing with this issue).

The WP noted the points mentioned in the discussion.

The GoE concluded that the present composition of the WP is fine, however GoE agreed to add corresponding members from BE, DE, SE, FI, AT, and CZ. If deemed necessary, additional specialists will be invited on an ad-hoc basis.

# 3.2.3. Revision of chapter 7 of the ICRP Recommendations

The EC presented the document (see distributed document) which has been drafted by a member of the GoE and subsequently discussed in the WP NORM. The WP NORM reported that the document reflects some of the thinking of the Working Party; however, the WP NORM did not yet address the issues radon, building material and exposure of aircrew.

The GoE thanked the EC and acknowledged the good work done. While the Group of Experts concluded that the re-draft still reflected ICRP's views rather than the GoE's, it constituted a considerable improvement. Additional input from the GoE should contribute to further improve the document. The GoE suggested that ICRP should consider addressing cosmic radiation (air crew) and improving the text on thoron conversion factors.

The GoE concluded that the document should be forwarded to the ICRP as an EC document but not as a GoE endorsed document. The EC agreed to send the document to the ICRP with a cover letter explaining the views of the GoE and noting that the issues building material, radon in dwellings and workplaces, and aircrew exposure have not yet been addressed in GoE Working Parties.

# 3.3. WP Exemption and Clearance

The chairperson of the WP presented the final report (see distributed document) and addressed in particular the differences between the IAEA document RS-G-1.7 and the EC RP 122. The WP recommended applying the RS-G-1.7 values for both

exemption and clearance. It further recommended launching a study which should allow explaining the assumptions made for the calculation of the values given in EC RP 122 and in IAEA RS-G-1.7, explaining the differences and comparing the resulting values.

The GoE thanked the WP Clearance and Exemption for their work and welcomed the proposal to launch the above mentioned study, which will help to evaluate the implications of adopting harmonised values. Further discussions should be postponed until the results of the study become available.

In addition, the GoE discussed the economic/financial implications of abandoning the current exemption values as well as the use of the RS-G-1.7 values for transport. It was recognised that the IAEA has not yet fully discussed this issue. The EC confirmed that it will bring up this issue at the IAEA. The IAEA confirmed that the discussion is still going on and that it aims at a uniform set of values.

In conclusion, the GoE recommended launching the above mentioned study. The EC announced that it had already proposed a related study for the year 2007.

# 3.4. WP MED (also covering point 5.1.)

The chairperson summarised the activities of the WP. With regard to the revision of the BSS, the WP sees no urgent need to change the Directive on Medical Exposures (Council Directive 97/49Euratom), however, the WP MED assumes that the text could be integrated into a revised BSS. The chairperson underlined further the importance of improved efforts regarding education and training and the urgent need to hold a follow-up of the Dublin conference on the medico-legal issue.

The EC informed that a project on a follow-up for the Dublin conference has already been proposed for 2007.

# 3.5. Establishment of a new WP on a Graded Approach to Regulatory Control

The EC presented a proposal to establish a Working Party on a Graded Approach to Regulatory Control, which was inspired by the approach developed by the WP NORM. The new WP will be mandated to review the Article 4 of the current BSS. A draft mandate of the WP has been discussed and approved at the last WP BSS meeting.

The GoE confirmed the establishment of such a WP. Some members of the WP BSS had expressed their interest in this topic and offered to be members of this new WP. A Czech GoE member was asked to chair the WP and agreed. In addition, experts from the UK and FI expressed interest to participate in the work of the new WP.

# 4. AGENDA ITEM 4: INFORMATION FROM INTERNATIONAL ORGANISATIONS

Agenda points 4.4. and 4.5. were not dealt with.

# 4.1. IAEA

The representative of the IAEA presented the activities of the IAEA (see copies of his overheads), and reported, in particular, on the revision of the International BSS. He underlined the need to maintain regulatory stability which requires a thorough justification of any change. The creation of a BSS Secretariat involving all cosponsoring organisations is an essential step towards international harmonisation.

The GoE acknowledged the work of the IAEA and thanked the IAEA representative for the continuous support and further development of the IAEA-EC cooperation.

#### 4.2. ICRP

As no ICRP representative could be present, a member of the GoE involved in Committee 3 of ICRP gave a brief report (see copies of his overheads) on ongoing activities in Committee 3 and important issues to be addressed in the medical area.

The GoE briefly discussed the presentation. Some members expressed doubts whether this long list of open medical issues can be dealt with in a reasonable time. The presenting GoE member mentioned that about 2 years are foreseen for this activity.

# 5. AGENDA ITEM 5: REVIEW AND PRIORITISATION OF THE ACTIVITIES OF THE WORKING PARTIES (WPS)

Agenda point 5.1. was already covered under agenda point 3.4.

# 5.2. Research Implications and on Health and Safety Standards (RIHSS)

The chairman presented the activities of the WP regarding topics for future scientific seminars of the Article 31 GoE. The WP offered as possible topics for the next scientific seminar different aspects of NORM and radon, the tritium issue, which is of particular relevance to the ITER fusion reactor, the space and flying personnel issue, individual radiation sensitivity, and the waste issue. In addition, dose coefficients and non-cancer diseases were proposed.

The GoE discussed the different interesting proposals and concluded that the next scientific seminar will deal with the tritium issue covering for example tritium dosimetry and the radiation weighting factor. The seminar will cover half a day.

# 6. AGENDA ITEM 6: FOLLOW-UP TO THE SCIENTIFIC SEMINAR ON "NEW INSIGHTS IN RADIATION RISK AND BSS

All agenda sub-points (6.1.-6.3.) were discussed simultaneously.

The chairman of the WP RIHSS who is in charge of the organisation of the Scientific Seminar in cooperation with the EC presented the highlights of the seminar summarising them in seven key-points (see distributed copies of the presentation).

The GoE discussed in detail the seven presented key-points, and agreed that the following five key points should be transmitted to the ICRP:

- 1) Cataract: The current threshold concept and the yearly dose limit for the lens are challenged. ICRP should not postpone revisiting the relationship between the dose to the lens and the occurrence of cataracts. ICRP may also revisit the introduction of protection measures such as introducing lens dose constraints based on good practice.
- 2) Pregnancy: Some formulations in the current ICRP Draft Recommendations regarding exposure during pregnancy could be interpreted as 100 mSv during pregnancy being the "limit of concern" in medical exposures and prolonged exposure situations. These formulations should be avoided. In addition, there is a danger that the value 100 mSv is being considered as a general threshold: ICRP should revise the corresponding text to prevent misinterpretation.
- 3) Genetic risk: All experts agreed that genetic risk is not limited to two generations and that there are still uncertainties related to the following generations that should be clarified. ICRP should recognize this and revise the current formulations in its recommendations.
- 4) Dose and dose rate effectiveness factor (DDREF): A central estimate of DDREF that is lower than 2 is indicated by the currently available evidence. This is reflected by the central estimate of the DDREF of 1.5 adopted by the BEIR VII Report. From a Radiation Protection point of view, adopting the position of BEIR VII regarding DDREF seems to be more justified.
- 5) Radon: The constraints proposed by ICRP (600 Bq/m³ for dwellings and 1500 Bq/m³ for work places) should be recalculated. New epidemiological data show statistically significant effects at radon concentrations lower than 200 Bq/m³. From a public health perspective, taking actions for radon concentrations in dwellings as low as 100 Bq/m³ might be justified, depending on national situations.

In addition, the GoE discussed the proposed key points on age sensitivity and on gender sensitivity, but decided that these two points should not be forwarded to ICRP. The WP RIHSS met the day after the meeting of the GoE and prepared a final version allowing for the conclusions of the GoE.

The conclusions of this Scientific Seminar, in particular the five key points, will be forwarded to ICRP and presented at the 3<sup>rd</sup> NEA/ICRP Forum on "The Future Policy in Radiation Protection", 24 – 25 October 2006 in Prague.

The GoE acknowledged the high quality of the seminar, the very fruitful and clarifying discussions and thanked the WP RIHSS for its excellent work.

# 7. AGENDA ITEM 7: INFORMATION BY THE COMMISSION

The Commission informed the GoE on the latest legal developments in the Commission, emphasising the signature of the "Convention on Early Notification of a Nuclear Accident" and the "Convention on Assistance in Case of a Nuclear Accident or Radiological Emergency" by EURATOM.

The Commission reported, in addition, on the current situation of the Drinking Water Directive, the published Communication on Article 35, a forthcoming report on the verifications performed under Article 35, and on the status of work regarding the recommendation on Article 37 submissions.

# 8. AGENDA ITEM 8: PUBLICATIONS

The Commission reported that the reports on "Collective Dose" and on "Consumer Goods" will be finalised soon.

The Commission is planning to publish the proceedings of the Scientific Seminar, held on 17 October 2006, in the Radiation Protection Series.

# 9. AGENDA ITEM 9: ANY OTHER BUSINESS

No matter was raised under this agenda item.

The Chairman thanked all participants and interpreters and closed the meeting.

# **REMINDER**

Meeting dates for 2007: 12-13 June and 13-14 November (Scientific Seminar in the afternoon of November 13).