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## NDAWG OPEN MEETING 15<sup>th</sup>-16<sup>th</sup> November, 2006

### Paper 10.09: Has NDAWG Met its Objectives? The Future of NDAWG

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#### 1 Background

The National Dose Assessment Working Group has now met 9 times since April 2002 and the aim of this Open Meeting is to review the progress so far and to consider what should happen in the future. This paper will consider what actions NDAWG has taken to meet its terms of reference. It will then go on to consider what should happen to NDAWG in the future, including a possible work programme.

#### 2 Terms of reference

The aim of NDAWG is to bring together people and organisations with responsibility for, and/or an interest in, the assessment of radiation doses to the public from the operation of the nuclear industry and from minor users of radioactivity. The main focus of the work of NDAWG is past, present and future authorised discharges and direct radiation; initially the Group's scope does not include accidents or solid waste disposal. The agreed terms of reference are discussed here together with the actions NDAWG has taken so far to meet them.

- i **To facilitate the exchange of data and views between all parties on assessment methodologies.** This is mainly done through the NDAWG meetings themselves, where relevant topics are discussed and appropriate actions are taken. The NDAWG website also helps to ensure that information on dose assessments for routine releases is widely available.
- ii **To advance the understanding between groups who are likely to have differing objectives and views on dose assessment methods.** Again this is mainly done through the meetings of NDAWG and the sub-groups. In discussing relevant topics care is taken to ensure that all views are presented. A useful input to this was a comparison of three dose assessments carried out for the Winfrith nuclear site as part of the authorisation process. The Environment Agency, the Food Standards Agency and the site operators each carried out an assessment. They all estimated doses that were low but there were significant differences between them, prompting discussion of what more NDAWG should do. The membership of NDAWG should ensure that this objective is met, as it includes representatives from Government, Industry and non-governmental organisations, as well as independent experts. However, on a number of occasions it has not been possible for the independent members or those representing non-governmental organisations to attend meetings and so their viewpoint has been missed. All papers, including the agreements and actions of meetings, are circulated to members for comment before publication to this does give another opportunity for members' views to be taken into account, even if they were not at the meeting. Support is also given to members to attend meetings where necessary. However, there will always be a problem where members are individuals and cannot call on someone else from

their organisation to cover for their absence. This is an issue that NDAWG will need to address in future if it is to be fully representative.

- iii **To facilitate the development of coherent transparent methods for the assessment of radiation dose to the public from all pathways which arise as a result of the operations at nuclear and non-nuclear sites.** A significant part of NDAWG's work programme related to meeting this objective. The principles for prospective and retrospective assessment of radiation doses from routine discharges were presented and discussed at NDAWG meetings (see NDAWG/2/2005). However, the comparison of three dose assessments mentioned above showed that further progress was required. The dose assessment methodology adopted by FSA for assessing radiation doses from authorised discharges has been discussed by NDAWG on several occasions. As a result of these discussions FSA has modified their methodology and this should help to ensure a more consistent approach in such assessments in future. To also help with this a protocol is being developed for prospective dose assessments for authorised discharges. The work of the sub-group on habits data and critical groups should also contribute towards meeting this objective. For retrospective dose assessments the total dose methodology developed for the Radioactivity in Food and the Environment (RIFE) reports (see NDAWG/3/2005) should also ensure a coherent and transparent approach. The CD accompanying the RIFE reports gives details of the habit data that are used to assess the doses, which aids transparency. The RIFE reports are also now starting to include information on all relevant exposure pathways, including direct radiation doses from nuclear sites. Although there has been progress on this, further work is required if NDAWG continues and it will be important to keep this objective under review.
- iv **To meet on a regular basis (every 6 months) to discuss matters of mutual concern, and developments arising out of research, case histories (e.g., recent consultations) or changes in government policy.** NDAWG has met approximately every 6 months since it started in April 2002. It has considered consultations, such as those carried out by ICRP, and has been informed of relevant developments from Government. For example, members from the Department of the Environment, Food and Rural Affairs (DEFRA) and the Scottish Executive have reported on issues relating to contaminated land and possible changes in European Union Directives.
- v **To identify, discuss and evaluate research which will progress dose assessment methods.** A database of current research has been established and is published on the website. However, this is not necessarily complete and possibly more action should be taken to update it. The sub-group on modelling was set up to identify gaps in research and reported in NDAWG/2/2006. Areas for research can also come out of discussions in NDAWG meetings. An example of this is the need for more work on the transfer of phosphorus- 32 in the environment, particularly its transfer to freshwater fish. EA and FA have both instigated work programmes following this request from NDAWG and report back on progress. It will be important to review the findings of NDAWG/2/2006 and to determine whether any progress is being made.
- vi **To initiate debate beyond the group on key issues, as necessary (for example via the Society for Radiological Protection).** The main way of trying to meet this objective is via the NDAWG website. This contains details of the work of NDAWG, many meeting papers and the NDAWG reports. The paper on exposure pathways specifically asked for feedback on unusual pathways and an e-mail address was established for this purpose. There is also a general NDAWG e-mail address for queries.. Although the website is very popular and people download papers we receive very few e-mails to the NDAWG address requesting information etc. The Journal of the Society of Radiological Protection (SRP) has published information about NDAWG and we distributed information about this open meeting to SRP members. One of the reasons for holding this open meeting was to try and initiate a wider debate as well as to inform a wider audience of the work of NDAWG. As well as SRP professional organisations for hospital physicists and University radiation protection officers were also informed of the open meeting.
- vii **To keep abreast of international developments on dose assessment methodologies, and to provide feedback to the appropriate UK authorities for input into EU bodies.** The main way that NDAWG has addressed this objective is through the joint response to the consultation on ICRP draft documents. There have been three sets of responses. Firstly, on the 2005 draft recommendations of ICRP that were published on the ICRP website in June 2004. The consultation period was long enough for this to be discussed in a NDAWG meeting and for

substantial comments to be compiled from members, circulated for agreement and then submitted to ICRP. The second response was to the consultation on several ICRP Foundation documents, prepared in support of the main recommendations. It was not possible to discuss these in a meeting but members provided comments on the different draft documents which were compiled and then circulated for review by members before submission. Finally ICRP issued its revised draft recommendations for comment in June 2006 and the same approach was adopted to submit NDAWG's comments by 15 September 2006. In addition the report back from members item on the agenda is used to enable members to update each other on any international developments.

At the Open Meeting there will be the opportunity for formal and informal discussions on how well NDAWG has met its objectives and also on how well it has followed the recommendations from the original FSA consultation exercise on dose assessment (CEDA) (see Paper 10.08).

### 3 The future of NDAWG

There are a number of questions that the Open meeting should address to determine the future of NDAWG. The main questions are listed below together with a recommendation from the Steering Group on what action should be taken. Further questions are likely to arise during the course of the Open Meeting and will also be discussed.

- **Is the National Dose Assessment Working Group still required?** NDAWG has been in existence for nearly 5 years has its work been helpful and does it still have a role to play in the future? The previous points from this paper indicate that there is still work for NDAWG to do and so the Steering Group recommend that it is still required, that it performs a useful role and so that it should continue.
- **Should the membership stay the same or change?** There are currently 28 members of NDAWG, 16 representing Government Department and Agencies (4 of whom are essentially corresponding members only), 6 representing various parts of industry including non-nuclear/small users and 6 who are independent or representing non-governmental organisations (NGOs). There are also 2 members of the secretariat which is provided by the Radiation Protection Division of the Health Protection Agency (HPA-RPD, formerly the National Radiological Protection Board (NRPB)). Originally there was also a representative of Local Authorities but the member moved to other work and it has not been possible to replace him – should further efforts be made to do so? The numbers on NDAWG have been kept below 30 to ensure that there is a good discussion at the meetings but should they be opened more widely to ensure all interested parties could attend if they wish?
- **What should NDAWG do to encourage participation from sufficient members so that all types of members are represented at the meetings?** As previously discussed there has been a problem in ensuring that sufficient independents who can be thought to represent views of NGOs attend NDAWG meetings. There is assistance with expenses but these members have a lot of other demands on their time, which can prevent them from attending meetings, and they do not have an obvious alternate that can attend in their place. Is there a way that this can be overcome – say by having more of this type of member to increase the chances of their views being represented at meetings? The Steering Group feels that the membership is broadly correct but that it is very important to ensure more participation by independent and NGO members. Numbers at meetings should be kept below about 30 to enable everyone to participate in discussions.
- **Should NDAWG change its way of working?** Currently NDAWG has 2 main meetings a year with e-mail consultation in between as necessary. There are also 3 sub-groups that also meet about 2 times a year with e-mail consultation. The results of NDAWG's work are presented on the NDAWG website and aim to represent the views of most members; NDAWG papers do not necessarily represent the views of the organisations members come from and in this respect NDAWG is felt to be an independent voice. The Steering Group recommends that this way of working should broadly continue but welcome any suggestions for improvements.

- **Is a Steering Group necessary for NDAWG to work well?** The Steering Group oversees the work of NDAWG through proposing the work programme and planning the main NDAWG meetings. The Steering Group also reviews the meetings and membership to ensure that NDAWG is working effectively and that all stakeholders are represented. An alternative would be for the Chairman and Secretariat to initiate the work programme etc in consultation with the full membership of NDAWG but this would not necessarily then reflect sufficiently a full range of views. As membership of the Steering Group reflects that of NDAWG as a whole the Group recommend that this way of working continues.
- **Should HPA-RPD continue to provide the Chairman and secretariat for NDAWG?** NDAWG was established through discussions between EA, FSA and what was then NRPB, with later input also from the Nuclear Installations Inspectorate (NII). NRPB was asked to provide the secretariat for the new group and it was agreed that John Cooper from NRPB should be asked to be Chairman. HPA-RPD continues to provide the secretariat for the main group, the steering group and for 2 of the sub-groups (FSA currently provide the secretariat for the Habits and critical group sub-group). The effort required to provide the secretariat is over 300 hours per year, with more this year to prepare for this open meeting and to fulfil various actions from the meetings. HPA-RPD is prepared to carry on in this role if required and the Steering Group supports their continuation. John Cooper is prepared to continue as Chairman although notes that he is coming up for retirement in the next few years. The Steering Group would like him to continue as Chairman until then.
- **Should NDAWG broaden its remit?** Currently the remit of NDAWG only covers the assessment of radiation doses from normal, planned operations of nuclear and non-nuclear operations discharging radionuclides to the environment. Suggestions have been made that NDAWG could extend its remit to also include contaminated land, accidental releases and solid waste disposal. There could also be the possibility that it moves completely from considering normal operations to one or more of these alternative areas. If there is a change in remit then there may also have to be a change and/or increase in membership. Some of the members have particular expertise or interest in dose assessments due to routine operations and other people would need to be brought in to cover the extended areas. This is particularly the case for accidental releases and solid waste disposal where the important issues for dose assessments are different from those for routine operations. The differences are not so marked when considering contaminated land. The aim of NDAWG was to resolve conflicting approaches in dose assessment methodologies. So a relevant question is, are there other areas of conflict that a group such as NDAWG could help to resolve? The Steering Group recommends that the remit of NDAWG continues to cover normal operations, as there is still work to be carried out in this area, but that the remit is also extended to consider contaminated land initially ( this has therefore been included in the proposed future work programme). The Steering Group welcomes views on whether NDAWG should also consider accidental releases or solid waste disposal.
- **To what extent should NDAWG be concerned with the assessment of doses to non-human biota?** Currently, NDAWG is only keeping a watching brief on protection of non-human biota. This is considered to be a related issue to dose assessments to humans and so of interest to NDAWG. However, at present NDAWG do not plan to make any recommendations or provide advice on this topic. Should this policy be changed and the remit of NDAWG be extended to specifically include protection of non-human biota?
- **Should NDAWG do more to inform people about its work?** NDAWG mainly relies on the website to inform people about its work. Information is also likely to be spread through the membership and this open meeting was intended to also inform more people working in the field of the work of NDAWG. There is now a sub-group on communications that is looking at the issue of communicating with the public. This is probably an area where NDAWG could do more and the Steering Group would welcome suggestions of what could be done.
- **If NDAWG continues what should be the priorities for future work?** The Steering Group has a proposed work programme for NDAWG for the next few years (given in the following section). Do people think that this is appropriate, that the priorities are correct and that all important issues are covered?

## 4 Proposed future work programme

**Meeting 11.** The use and calculation of collective dose, and environmental monitoring in relation to retrospective dose assessment

**Meeting 12.** The impact of radioactive particles in dose assessments, and the outcome of the research into phosphorus in the freshwater environment.

**Meeting 13.** Atmospheric dispersion and contaminated land issues.

Remaining topics are as follows:

- Modelling developments and studies relating to the transfer of radionuclides in the marine environment.
- Validation of sewer dose assessment methodologies.
- Response to the new ICRP recommendations
- Response to any changes in the EC Basic Safety Standards
- The need to consider the transfer of radionuclides to breast-fed infants
- Compatibility of dose coefficients for ingestion and inhalation and related habit data

Views are welcome on whether this work programme is appropriate as are suggestions for further topics. At the Open meeting we will need to determine priorities for the future work of NDAWG.