

NATIONAL DOSE ASSESSMENT WORKING GROUP

SUMMARY OF AGREEMENTS AND ACTIONS FROM 12TH MEETING

12th Meeting held on 21st November 2007, Aviation House London.

1. Present

Chair	John Cooper	HPA
Members	Rob Allott	EA
	Kwabena Andam	FSA
	Laurence Austin	British Energy
	Stuart Conney	FSA
	Andrew Corns	GE Healthcare
	Paul Dale	SEPA
	Ian Fairlie	Consultant
	Ian Hall	Scottish Executive
	Steve Jones	Westlakes Scientific Consulting
	John Hunt	Independent
	Paul Kennedy	FSA
	Ray Kowe	HPA
	Barrie Lambert	Consultant
	Tim Parker	BNFL
	Jane Simmonds	HPA
	Patrick Stephen	NII
	Jill Sutcliffe	Independent
	Mike Thorne	Consultant
	John Titley	EA
	David Webbe-Wood	FSA
	Chris Wilson	DEFRA

Apologies:

Lucy Bailey	NDA Radioactive Waste Management Directorate
Andrew Craze	NDA
Philip Day	University of Manchester
Michael Gaunt	Rolls-Royce
Gerald Hudd	Somerset County Council
Robert Larmour	Dept Environment (NI)
Simon Morgan	NDA Radioactive Waste Management Directorate
Will Munro	FSA Scotland
Havard Prosser	National Assembly for Wales
Catherine Retberg	Springfield Fuels

The Chairman welcomed the new members:

Katie Davis on behalf of Lucy Bailey and Simon Morgan as representative of NDA Radioactive Waste Management Directorate

Jill Sutcliffe (Consultant)

The Chairman wished Philip Day a speedy recovery from his illness.

The Chairman informed members that this was Ian Hall's last NDAWG meeting; he took the opportunity of thanking Ian for his valuable contribution to the group and wished him well in his retirement.

2. Minutes of last meeting and matters arising (Paper 12-01)

Action 9.4 The habits subgroup to give advice on specification of consumption rates and zero or low occupancy rates. *Completed. These issues are covered in the 2nd paper from the subgroup which will be discussed as an agenda item.*

Action 9.6 Habits subgroup to draw up new terms of reference and a revised structure for the paper on habits data for prospective assessments and issue to NDAWG members for comment. *Completed. The new terms of reference for the subgroup and paper will be discussed as an agenda item.*

Action 9.7 Mike Thorne to contact Pete Roche to see if he would like to remain as a member of the habits subgroup or to suggest another NGO representative. *Completed. Mike has contacted Pete and asked him if he would like to remain as a full member of the subgroup or become a corresponding member. Mike is awaiting a response from Pete.*

Actions from 11th meeting

Action 11.1 Ian Hall to put forward the work of NDAWG at the UK Irish group meeting in early summer. *Completed. Ann McGarry of RPII has written to say that they would be interested to hear more about NDAWG and to collaborate in future.*

Action 11.2 John Titley to report back on the EA's Guidance on Requirements for Authorisation (GRA). *Completed. John sent an email which was circulated to members.*

Action 11.3 EA, FSA and SEPA to give presentations at the next NDAWG meeting on the authorisation process. *Completed. This is on the agenda as Paper 12-04.*

Action 11.4 NDAWG Secretariat to produce a draft of the general overview document for the consolidated guidance to bring to the 12th meeting. *Completed. The draft of the overview guidance document has been circulated amongst members. This is on the agenda as Paper 12-02.*

Action 11.5 Rob Allot to produce drafts of the initial assessment tools and exposure pathways documents for the consolidated guidance to bring to the 12th meeting. *Completed. The drafts of the assessments guidance documents have been circulated amongst members. This is on the agenda as Paper 12-02.*

Action 11.6 Jane to report on progress of work on presentation of doses to the public at the 12th meeting. *Completed. A PowerPoint presentation has been prepared and is on today's agenda.*

Action 11.7 NDAWG members to email Bill Camplin their comments on paper 11-03 by the end of June. *Completed.*

Action 11.8 NDAWG members to send their comments on the communications subgroup leaflet to Barrie Lambert. *Completed. This will be discussed under agenda paper 12-05.*

Action 11.9 John Cooper to present an overview of the latest ICRP recommendations at the 12th NDAWG meeting. *Completed. John's report back on current ICRP activities is on today's agenda.*

Action 11.10 The communications subgroup secretary to let John Titley know the date of the next subgroup meeting. *Completed.*

Action 11.11 Barrie Lambert to summarise the findings of the AGIR subgroup on tritium at the 12th NDAWG meeting. *Completed. Barrie's report back on the AGIR subgroup's work is on today's agenda.*

Action 11.12 The Secretariat to consider amending the first term of reference to reflect that NDAWG will be doing more to tell people of its work. *Completed. This will be discussed under agenda paper 12-09.*

Action 11.13 The Steering committee to consider the inclusion of risks in the terms of reference. *Completed. The Steering committee has decided not to include risk, this will be discussed under agenda paper 12-09.*

Action 11.14 The Steering committee to finalise the agenda for the 12th NDAWG meeting and to consider the future work programme including when to consider solid waste issues. *Completed.*

Matters arising from 11th meeting

A note on the open meeting has been sent to JRP and this is expected to appear in the next issue.

Research database: HPA-RPD has now received several contributions from members, an updated version of the database will shortly be loaded onto the website.

There are now about 50 people on the list for e-mail alerts and who could be asked to comment on guidance notes, this will be discussed under agenda Paper 12-02.

3. Presenting doses to the public

Jane Simmonds demonstrated the PowerPoint display of the proposed system for presenting doses to the public. She informed the group that the intention is to add additional information, improve the wording and pass it to the HPA web design group to create a final product that will be brought to the April meeting or, if possible, released on a dedicated secure website so that NDAWG members can comment on it.

There were some queries from members. Barrie Lambert asked why the radiation dose below which no action is necessary is 10 mSv and not the public dose limit of 1 mSv. Jane said that this was because it included natural radiation and it related to the radon action level

and stressed that the form of words for the system still needs to be finalised. Mike Thorne asked if the linked sites on the system were HPA approved. Laurence Austin suggested having a disclaimer that the HPA are not responsible for the linked sites. Steve Jones said that the dose values given at the top level do not show the variability in dose. Jane said it is worth emphasising that the doses are average and by moving down the system more detail on dose variability is available. Mike suggested a less hierarchical tree structure that gives a matrix of different routes at the top level that the user can explore. Chris Wilson suggested a link to the EA's discharge website might be useful.

Members agreed that the presentation looks very good and is worth exploring further.

4. Guidance notes on best practice in dose assessments (Paper 12-02)

Jane gave an overview of the first three of the draft guidance notes and outlined the possible options on a consultation process which includes: put them on the NDAWG website for a period of three months; distribute them for comment to the NDAWG email list; members to pass them to other groups; send them out to people who may be interested.

Action 12.1 NDAWG members to send in their written comments on the guidance notes to the Secretary by January 10th.

Action 12.2 Patrick Stephen to consider how to distribute the NDAWG guidance notes to NORM industry people.

The secretariat will provide a cover sheet for the final version of the guidance notes which will make it clear that this is not a formal consultation and that NDAWG will not be responding formally. However, NDAWG welcomes comments on the notes which will be taken into account in producing the final version as far as possible. The notes and draft cover sheet will be sent back to members who will have a week for further comment before they are distributed to interested parties and go on the NDAWG website. Currently the Principles for Retrospective dose assessment is an NDAWG report and the possibility of it being a formal EA/SEPA/DoENI/FSA/HPA document like the Principles for Prospective Assessment was raised. For this to happen there would have to be a three month formal consultation. Also both Principles Documents cannot be finalised until the Defra guidance to EA is published so it was agreed that this was not practicable at present.

There were a number of comments on the Guidance notes. Members felt that a glossary should be included in each guidance note. Steve Jones asked about the status of the guidance notes. The chairman said the notes were the collective opinion of a group of experts on good practice and that NDAWG welcomed other people's thoughts on the guidance. They are not necessarily endorsed by member's parent organisations, though we expect our opinions to be taken on board by other groups in the UK. Jill Sutcliffe commented that date and version control needs to be consistent in the documents. John Hunt suggested the term "This information should also be supplied to the site operator" on the second page of guidance note 2 should be rephrased as "This information should also be discussed with the site operator". Mike Thorne had a number of comments that he will pass to the NDAWG secretary. His major concern on guidance note 2 was that the justification for the step from the EA initial assessment methodology to W63 needs to be clearer. John Hunt also queried

who the note was for, was it just small users? Rob Allot said the note was addressed to anybody who was interested in assessments, not just small users. Mike Thorne said that it would be useful to integrate aspects of the initial assessment methodology and W63 into a computer-based tool (e.g. spreadsheet) that could be used by small users to undertake comprehensive assessments with limited resources. Paul Dale gave the opinion that NDAWG should not be prescribing assessment pathways/models as this could stifle innovative approaches.

The chairman said that NDAWG would progress these three guidance notes and asked the steering committee to consider which further guidance notes should be produced.

Action 12.3 The steering committee to consider the plans for future NDAWG guidance notes.

5. Impact of radioactive particles in dose assessments (Paper 12-03)

Paul Dale presented work carried out by SEPA on these exposure pathways to the public which is of renewed concern. As the probability of encounter is generally less than unity standard dose assessments are not appropriate which means specific assessments need to be undertaken to determine risks to health. There were a number of questions on the paper. Mike Thorne said it is important to distinguish between the risk to any one individual and the risk to some individual (for sparsely distributed particles, it will be very unlikely that any one person encounters one, but, e.g., on a well used beach, even though any one person has a very low probability of encountering one, there may be a high probability that one or more individuals encounter a particle). He further noted that the public would be concerned even if only one person encountered a particle. Paul said the individual risk to any one person using the beach needed to be assessed. John Hunt queried the use of the term '100 mSv effective dose'. Paul said the 100 mSv relates to a trigger level for the designation of radioactively contaminated land in Scotland and was irrespective of the probability of encounter. Steve Jones asked what is the 100 mSv dose to (is it local or to specific organs?). Paul said it is for a particle which can deliver 100 mSv total committed effective dose. There was then some discussion by members as to the exposure pathways from such particles.

Members agreed that the paper was useful since no such guidance exists in this area and felt it would be useful to have an NDAWG paper on this topic. The chairman agreed that there was need for such guidance and suggested that a subgroup was set up to consider radioactive particles.

Action 12.4 The steering committee to draw up draft terms of reference for a subgroup on radioactive particles and to consider membership of the subgroup.

6. The authorisation process (Paper 12-04)

John Titley and David Webbe-Wood gave an overview of the EA and FSA involvement in the process for granting authorisations to existing nuclear licensed sites, non-nuclear licensed sites and for sites where there is not a pre-existing authorisation. They also highlighted the

steps the EA, SEPA and FSA have moved towards an agreed and consistent methodology for making retrospective assessments of total dose.

Mike Thorne commented that the assessment methodology for authorisation assessments seeks agreement on parameters for atmospheric dispersion but not for aquatic dispersion. John replied that aquatic dispersion was not included in the NDAWG recommendations for the EA and FSA assessment methodology. John Hunt asked how the funding for the extra effort to do annual reviews would be found. Rob Allott said that there would be savings as the new process will be quicker than the current process which is long and drawn out. Tim Parker asked if the information on the extent of the consultation process is available on the EA website. He also asked if the FSA can veto the authorisation. John said that there would be considerable consultation taking place and this situation would hopefully not occur.

Action 12.5 John Titley to check if the EA authorisation consultation process is available on their website.

Rob Allot informed members that there was a chance that in the future RSA 93 may be replaced by the Environmental Permitting Regulation (EPR) in England and Wales.

The chairman said that NDAWG welcomes the fact that the EA and FSA are addressing the NDAWG recommendation that they agree on basic assumptions and data in their assessment methodologies.

7. Report back from the subgroup on communications (Paper 12-05)

Barrie Lambert updated members on the arrangements for the seminar on risk communication that will take place at HPA-RPD Chilton, 21 February 2008. He also described the status of the information leaflet that will be published as an NDAWG document complete with illustrations. A version of the leaflet without the illustrations will be trialled by various NDAWG members amongst different groups. The leaflet would also be useful as speaking notes for a presentation which would be a set of PowerPoint slides with illustrations based on the questions. The chairman informed members that depending on cost, the HPA has agreed to publish the leaflet and suggested the leaflet could be also trialled amongst the Harwell local liaison committee.

Action 12.6 Barrie Lambert to send a text version of the communications subgroup information leaflet to Ray for distribution for trial.

Action 12.7 Barrie Lambert to prepare a list of trial questions to be issued with the communications subgroup information leaflet.

Barrie also outlined the future work of the group. Barrie has produced a draft note on collective dose which discusses the pitfalls of collective dose and when it is to be used. This will serve as the basis of a possible note from the subgroup in the future. The subgroup was not going to give advice on how to estimate risk from dose. The subgroup will be considering uncertainty and probabilistic assessments at its next meeting.

Action 12.8 Ian Fairlie to send Barrie Lambert a note on the work US EPA has done on communicating probabilistic risk assessment.

8. Report back from the subgroup on short duration releases (Papers 12-05 and 12-07)

Rob Allott gave an outline of the first paper from the subgroup on short term release to rivers. That paper includes a case study of discharges at the authorised limits from a hospital on the Thames. The subgroup hopes the conclusions of the case study could be included in a future NDAWG guidance document. The subgroup is planning a second paper on atmospheric short term releases that will include case studies on discharge patterns from a typical site and from a cyclotron. The subgroup hopes to produce this second paper as a first draft for the April 2008 meeting.

There were several comments from members. Jane commented that the coarse fishing season for the Thames includes the winter so that to combine occupancy with low summer flow may be inappropriate. John Hunt commented that Cefas may have information on seasonality in angling and suggested that the paper needs a paragraph explaining uncertainty in this type of assessment. Tim Parker said a release of 1% seems small and asked if this figure was based on measurements: he suggested 10% may be more realistic. Rob said the release limits were based on accountancy and he would address Tim's and other member's comments.

Action 12.9 John Hunt to investigate Cefas information on seasonality in angling data.

It was agreed that the HPA, Mike Thorne and Steve Jones would peer review the paper on short term release to rivers. Once all comments were taken on board the document will be worked up into a guidance document.

Action 12.10 NDAWG members to comment on paper on short term release to rivers by 10th January, 2008.

Action 12.11 The secretary of the short term release subgroup to send supporting information on short term releases to reviewers of the subgroup paper.

9. Report back from the subgroup on habits data (Paper 12-08)

Mike Thorne updated members on the current status of the habits subgroup which met on 19th October 2007 after a long interval. He outlined the new terms of reference for the subgroup and the content of its second paper on prospective dose assessments. The subgroup hopes to produce a first draft of this paper for the April 2008 NDAWG meeting. Fiona Clyne has replaced John Hunt as the Cefas representative. Mike informed members that he is to stand down as Chair of the subgroup from May 2008 due to future work commitments. The Chair thanked Mike for his contribution as Chair of the Habits sub-group.

NDAWG members endorsed the appointment of John Titley as the new chair of the subgroup on habit data and approved the new terms of reference for the subgroup with the following modification 'The types and amounts of data available' to 'The types and amounts of data available and data needed'.

10. The new ICRP recommendations

John Cooper gave members an overview of current ICRP activities and what is happening with the revised recommendations.

There were a number of questions and comments from members. Ian Fairlie asked who decides on the limits in the UK, the HPA? John Cooper informed Ian that the HPA advises on dose limits but is not the regulator. Patrick Stephen informed members that constraints are not deemed to be limits, they are merely guidance and that it is optimisation not constraint that is important. John Hunt commented that there can be significant difference in tissue weighting factors for different ages and sexes. Values are binned and average and not incredibly precise. Ian Fairlie asked John Cooper if untargeted effects were taken into account. John Cooper informed Ian Fairlie that such effects were included in the epidemiology and that risk factors were derived mainly from epidemiological studies on individuals exposed at Hiroshima and Nagasaki.

Action 12.12 The NDAWG secretary to send John Titley a copy of John Cooper's presentation on the ICRP recommendations.

11. Report back from members

AGIR - Barrie Lambert summarised the findings of the Independent Advisory Group on Ionising Radiation's subgroup on tritium dosimetry. A paper summarising the work has now been published (Review of Risks from Tritium. Report of the independent Advisory Group on Ionising Radiation. Documents of the Health Protection Agency. Radiation, Chemical and Environmental Hazards, REC-4. November 2007. ISBN: 978-0-85951-610-5).

HSE - Patrick Stephen reported on revision of IAEA BSS (a note of technical meeting has been issued to members). He informed members that the aim is to make sure the BSS follows the ICRP recommendations. The BSS will be a standalone document and not part of an IAEA Document series. The timescale is to issue the revised BSS to member states by 2009. The EC is to become a cosponsoring organization. The major issue with the BSS is that it should ensure regulatory stability and there is some concern from member states that any changes to the BSS should be justified.

Other – John Hunt informed members that the Society for Radiological Protection has been granted a Royal Charter and that it will be effective from 10th December 2007. The Society will contact all members in the near future regarding the mechanism for applying for use of the title Chartered Radiation Protection Professional, post -nominal letters CRadP. The fee for CRadP has been set at £20 per annum.

12. NDAWG review (paper 12-09)

9.1 TERMS OF REFERENCE

The first term of reference was changed at the last (11th) NDAWG meeting and the Secretariat was asked to consider adding something on publicising or disseminating the

methodologies. The following addition to the first term of reference was agreed by the Steering Group and is proposed:

1. To facilitate the exchange of data and views between all parties on assessment methodologies and to promote the use of best practice and consistent methodologies *through dissemination of NDAWG guidance.*

Members agreed on this proposed amendment.

The Steering Group felt that it would not be appropriate for NDAWG to consider topics related to risk and dose coefficients (i.e. the conversion from dose to health risks); however, the Steering Group felt that NDAWG would wish to be kept informed of developments in issues relating to risk.

9.2 FUTURE WORK

The following work programme was agreed.

Meeting 13. Update on doses to biota, contaminated land issues, including RCLEA, the inclusion of breast fed infants and the foetus in dose assessments, the IAEA EMRAS programme.

Meeting 14. Outcome of the research into phosphorus in the freshwater environment, modelling in the marine environment, sewer dose assessment comparison, update on the BSS revision.

Remaining topics are as follows:

- Response to the new ICRP recommendations
- Response to any changes in the EC Basic Safety Standards
- Compatibility of dose coefficients for ingestion and inhalation and related habit data
- Comparison of authorisation dose assessments
- Issues for solid wastes

9.3 RESEARCH LIST

The research database has now been updated and is to be added to the website shortly. The HPA-RPD is going to add to it. Contributions of work that is being/planned to be carried out by their organisation or third parties are still welcome from members.

9.4 WEBSITE

Between May 2007 and October 2007 there were 4853 visits to the NDAWG website (over 600 visits on average a month) with people accessing over 18,400 files.

13. Date of next meeting

The 13th NDAWG meeting will take place on 2nd April at the British Energy site, Barnwood, Gloucester.

14. Summary of Actions

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Action 12.2 Patrick Stephen to consider how to distribute the NDAWG guidance notes to NORM industry people.

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NDAWG Secretariat 26 November, 2007