

NATIONAL DOSE ASSESSMENT WORKING GROUP

SUMMARY OF AGREEMENTS AND ACTIONS FROM 16TH MEETING

16th Meeting held on 17th November 2009, Aviation House (FSA), London.

Final version 1

1 Present

Chair	Jane Simmonds	HPA
Members	Rob Allott	EA
	Bob Beveridge	MoD
	Ian Fairlie	Consultant
	Michael Gaunt	Rolls-Royce
	Stuart Hudson	Scottish Executive
	John Hunt	Consultant
	Steve Jones	Westlakes Scientific Consulting
	Paul Kennedy	FSA
	Ray Kowe	NDA
	Peter Marsden	University College London Hospital
	Wayne Oatway	HPA
	Patrick Stephen	NII
	Mike Thorne	Consultant
	John Titley	EA
Paul Tossell	FSA	
Invited attendees	Sam Watson	HPA
	Alex Elliot	COMARE

Apologies: Steve Chandler, Andrew Craze, Paul Dale, Barrie Lambert, Robert Larmour, Will Munro, Havard Prosser, Catherine Retberg, Pete Roche, Jill Sutcliffe, Stuart Conney, Andrew Corns, Gerald Hudd, Laurence Austin, David Webbe-Wood, Tim Parker, Tiberio Cабianca

The Chair welcomed members and the invited speakers to the meeting. The chair, with support from the Group, also thanked John Cooper for his excellent work in chairing NDAWG over many years.

2 Minutes of last meeting and matters arising (Paper 16-01)

Action 15.1 **Members** to send Rob any comments on the short term release paper by the 8th May and Rob to circulate to members an updated paper when comments have been included. *Completed.*

Action 15.2 **Mike Thorne and David Webbe-Wood** to ask SRP about organising the guidance road test workshop. *Ongoing. David had raised this at SRP although no decision has yet been made by SRP to do the road testing. Mike Thorne said he would follow this up with SRP.*

Action 15.3 **Members** to send Rob any comments on the short term release guidance note by the 8th May and Rob to circulate to members an updated note when comments have been included. *Completed.*

Action 15.4 **Steering group** to add a presentation on non-human biota to the May 2010 agenda. *Completed.*

Action 15.5 **Wayne Oatway** to place the communication leaflet on the NDAWG website. *Completed.*

Action 15.6 **John Titley** to provide Wayne with a link to the EA webpage where leaflets on dose assessments are located and Wayne to provide a link to these leaflets from the NDAWG website. *Action closed. EA have yet to publish these leaflets so the action will be closed down.*

Action 15.7 **Rob Allott** to consider whether guidance on releases that lasted many days could be added to the guidance note on short duration releases or whether this needed separate guidance. *Completed.*

Action 15.8 **Tim Parker** to produce a discussion note on accidental releases and CBRN. *Ongoing.*

Action 15.9 **Jane Simmonds** to timetable into a future meeting time for Tim to present his discussion note on accidental releases. *Ongoing.*

Action 15.10 **John Titley** to ask Stuart Page if he wanted to chair the heterogeneous contamination subgroup. *Completed. Although Stuart initially agreed to chair the subgroup he is now unavailable and it was agreed at this meeting to put the subgroup into abeyance until SEPA are able to provide effort as it was considered SEPA's involvement was crucial given their experience.*

Action 15.11 **Jane Simmonds** to add to the future work programme guidance on chemical speciation and the use of ICRP recommendations. *Completed.*

Matters arising

Since the last meeting guidance note 4 ([Guidance on considering uncertainty and variability in radiological assessments](#)) has been placed on the NDAWG website for consultation. The closing date for comments on this guidance note is the 12th February 2010.

Patrick has also provided the final text to the 5th guidance note on direct radiation to HPA. This is now being formatted and will be placed on the website imminently.

A discussion was held on the road testing of the guidance notes through SRP. Mike Thorne commented that it would probably take at least 2-3 months to arrange a suitable meeting, so he expects something to happen during the spring of 2010. Jane agreed that that was a suitable timescale. Members also commented that it was important that Peter Marsden was involved in the setting up of the SRP road test to ensure that it met the needs of non-nuclear users and that such users attended.

3 The work of COMARE (Paper 16-02)

Alex Elliot, chair of COMARE, presented a paper that outlined the work of COMARE and their recent and planned work, including an overview of the work groups set up by COMARE.

In the discussion Ian Fairlie queried why the COMARE study of nuclear power production sites did not include Calder Hall, which is on the Sellafield site. Alex noted that Sellafield was the main source of radionuclides in that area and, by including Sellafield, discharges from Calder Hall would be accounted for. Ian stressed that some discussion of Calder Hall was required. Jane commented by saying that the effects of Sellafield including discharges from Calder Hall had been studied many times in the past and hence the relative importance of discharges from Sellafield and Calder Hall were well known.

John Titley mentioned that, regarding the uncertainty in ICRP's published dose coefficients, the Environment Agency was reviewing these as well as COMARE and it seemed COMARE and the EA may be duplicating work to some extent. Alex commented that if one group had suitable datasets on this topic then COMARE and the EA should co-operate and share knowledge. John agreed.

A discussion was held on modelling for beaches and Mike Thorne noted that he had extensive information on this topic that could help COMARE in their work. This includes a database relating to the Sellafield and LLWR area which was compiled by Halcrow over about the last decade and is owned by the LLWR SLC. Modelling the evolution of this coastline has been undertaken by Halcrow and Mike Thorne and Associates Limited. Reports on this work are also held by the LLWR SLC. Mike Thorne and Associates Ltd have also undertaken studies on the coastal vulnerability of a variety of NDA sites. Through Quintessa, specific studies have been undertaken on coastal processes at Dounreay and flooding risks at Berkeley. Reports on these various studies should be available through the NDA. Alex thanked Mike and said he would appreciate anything that Mike could pass onto COMARE. All agreed that it was important that there was a commonality in the models being used.

John Hunt questioned how COMARE and NDAWG could work better together given their relative strengths (NDAWG on dose assessment and COMARE on risk assessment). Members agreed that the NDAWG steering group should consider adding the work of COMARE to the future work programme so that NDAWG members were kept informed of the work of COMARE. Jane commented that initially having an agreed set of work areas where co-operation between NDAWG and COMARE would be beneficial and suggested that work within, for example, the heterogeneous subgroup would be a good starting point for this discussion. Rob Allot also raised the question of whether COMARE would like a member to sit on NDAWG as a method to keep COMARE informed of the work of NDAWG. Jane pointed out that the secretariat of both COMARE and NDAWG was provided by HPA and to start with she suggested that the secretariats of both COMARE and NDAWG should discuss how best to keep each other informed of each others work.

Action 16.1 Jane Simmonds, with the secretariat of NDAWG, to discuss with the secretariat of COMARE how best to keep both organisations informed of each others work.

4 Comparison of sewer models (paper 16-03)

Sam Watson (HPA) presented a paper outlining the preliminary results of an intercomparison study of the sewer models being used by the HPA, FSA and EA. She noted that SEPA had also provided their model, but not specific results that could be incorporated into the study. Sam also pointed out that SEPA were relying more on measurements than models and that these could be used in future work within the project. Although the work was still in progress it was felt that having a discussion of the preliminary results now would be of benefit to members. It was agreed that a further paper would be presented at a later meeting to show progress within the study.

The work to date showed that there were differences between the end results produced by the models. Members commented that it was now important to identify those parts of the models that were significantly affecting the results. For example, differences in parameters such as partitioning factors. Sam commented that that some work on this had been done and noted that additional work would require significant extra effort. Members stated that it was now important to complete this work by explaining the results and supported the extra work involved.

Ian Fairlie commented that it may also be of benefit to the work if an actual discharge to a STW was used such that an actual facility was modelled rather than a unit discharge to a hypothetical facility, as this may remove some of the issues regarding default parameter selection, given the wide variety of sewage treatment processes currently in use at different STW. Jane commented that to date the study had concentrated on looking at what the models did rather than trying to match how they modelled a specific STW, although this may be included in future work.

John Titley noted that the study did not include the HPA W63 model as the more detailed HPA model, SMART was being used. Jane agreed and it was decided that W63 will also be included in this study if possible.

John Titley also asked that where pathways were not important then the project should note that in the final report. In particular, he noted that the EA model did not include exposure within pipes as it was assumed that this would result in a relatively small exposure compared with other pathways. It would be nice to have this confirmed by looking at the results of those models which did include this particular exposure.

It was agreed by those members present that the EA, FSA and HPA should continue with this project as it was felt that resolving any issues between the models was important, consistent methodologies being a prime justification for NDAWG. It was noted that FSA are undergoing a reorganisation at the moment and their contribution may be delayed until that is completed.

Jane asked members whether a working group should be set up by NDAWG to look at sewer models. Members felt that at this stage the current project was sufficient although this should be reviewed at a later meeting. Mike Thorne noted that he would be prepared to chair a working group or a subgroup if one were to be formed to look at sewer modelling.

It was agreed that a progress report on this project should be presented at the next meeting of NDAWG and that at the 18th meeting (November 2010) another presentation would be given as it was hoped that by then the project would be nearing completion.

Action 16.2 The **steering group** to add a feedback item to the agenda for the 17th meeting and a presentation item for the 18th meeting on the sewer model intercomparison study.

5 NDAWG annual research paper (paper 16-04)

Wayne presented a draft paper giving the possible layout of the NDAWG annual research report. Information in the draft report was based on feedback from members as well as a review of the research database currently on the website. Jane asked members whether they felt the format of the report was suitable and whether the information within the report was accurate. Members agreed that overall the format was suitable although a change in the headers was discussed. The new proposed headers will be: Guidance (those reports purely on guidance on dose assessments); Dose assessment methodologies; Assessment studies (those reports that detailed past assessments); Research and Development.

Members noted that at present the report contained a few notable omissions, such as the "Principles document", the EA technical report on sewers (P288) and the new IAEA technical document number 1616. Wayne agreed to put these into the report. Jane asked members to send any additional comments to Wayne by the 4th December. In particular, Jane asked members to review the entries within Chapter 7 which contain those references from the current research database for which Wayne could not find up to date information on. This work is still on schedule to be published by the end of the year.

Action 16.3 **All members** to send Wayne any comments of the annual research report by the 4th December

6 Report back from Subgroup on Communications (verbal presentation only)

Wayne updated members with the current work of the communications subgroup. He noted that the communications leaflet was now on the website and that Barrie had started drafting a guidance note. However, work was slow due to members not having sufficient time to contribute to the work Barrie had done to date. Unfortunately Barrie was unable to attend this meeting and members present were not sure what guidance the group could produce. They felt that it was important to provide guidance on how to communicate rather than what to communicate as many organisations had dedicated people dealing with communications and it made no sense in producing guidance for a mechanism that was already established. Members also suggested that guidance on the communication of probabilistic results was required. However, some members noted that any guidance produced had to relate to the work of NDAWG rather than communication in general. It was agreed by members that Jane would talk to Barrie and ask what he was planning to write, in particular with regard to small users. If Barrie felt that he was unable to progress this guidance note then he and Jane would agree whether the subgroup should be put into abeyance until such time as effort became available.

Rob Allot noted that it would be beneficial to have "off the shelf" material that placed doses into context, as well as having a collection of FAQs that have been raised previously.

Action 16.4 **Jane Simmonds** to ask Barrie what he planned on putting into the communication guidance note and to discuss the effort available within the communication subgroup

7 Report back from Short Duration Releases Subgroup (Papers 16-05, 16-06 and 16-07)

Rob Allot presented this item. At the last meeting the report on the short duration releases to the atmosphere was discussed and based on comments received the subgroup had updated both the report and the guidance note. A number of minor points were raised at this meeting. Ian Fairlie who asked whether the AGR profile in Figure 1 was correct given that it was “flat”. Rob said he would check the source of that data. John Hunt noted that the guidance note suggests that there is little seasonal variability in harvesting in coastal and estuarine waters, pointing out an example of cockling in Morecambe Bay. Rob said he would review what was in the guidance note on this matter.

Rob felt that both documents were now in a fit state to be reviewed by members and asked that any comments be sent to him by the 4th December. Mike Thorne said he would be happy to act as a peer reviewer for the report and he would try and get any comments back to Rob within December/January depending on when Rob gave him a final version.

It was agreed that if no substantial comments were received on either of the documents then the short duration releases to atmosphere report would be placed on the website when ready and that the guidance note would be placed on the website for consultation. Members noted that the guidance note relied on information presented in the report and so the report should be made available on the website before the guidance note.

It was agreed that following the publication of the guidance note that this subgroup would be wound up.

Action 16.5 All members to send Rob any comments on the short duration releases to the atmosphere report and the guidance note by the 4th December

8 Report back from Subgroup on Habits Data (Paper 16-08, 16-09)

Mike Thorne presented this item. He noted that the report on the [Acquisition and Use of Habits Data for Prospective Assessments](#) had now been placed on the website and based on that report he had started drafting the guidance note. Members noted that the guidance note currently only included information on prospective assessments and that it would be a good idea to include information on retrospective assessments as well so all such information was in one place. Mike agreed to this and will amend the guidance note. Several members also asked about the robustness of the methods given in the guidance note and asked if more information could be added as to why, for example, the profile method was adequate for use over the next 5 years or more.

Mike asked members to send any further comments on the guidance note to him by the 4th December. It was agreed that Mike would present the guidance note at the next meeting of NDAWG where it will be decided whether it is suitable for consultation. Following this consultation the work of the subgroup would be complete and so the subgroup could be wound up.

Action 16.6 All members to send Mike any comments of the habits guidance note by the 4th December

9 Report back from Subgroup on Heterogeneous Contamination

This subgroup was now in abeyance and, as such, no report was given on its work.

10 Report back from members

Jane Simmonds, as a member of ICRP Committee 4, gave a presentation of the work of the ICRP, noting that the Main Commission and its Task Groups had met the previous week. Jane handed members an outline of the membership of ICRP and of its subgroups. Included within this handout was a provisional publication timetable, noting that ICRP now hoped to increase its publication rate from 4 to 6 reports a year. Jane noted that revised dose coefficients were unlikely to be available before 2010 for external irradiation, 2011 for occupational exposure and 2013 for public exposure. Jane noted that following the meeting last week ICRP had put a statement on its website regarding radon. Jane also noted that international organisations, such as ICRP, IAEA, the EC etc had agreed that considerable effort was being placed in similar work areas and that effort was now being made to coordinate how these organisations worked to prevent overlap and duplication.

Patrick Stephen gave a report on the developments regarding new build. Patrick informed members that the process is now at stage 3 which is the overall design safety review. Stage 3 was expected to be completed soon and stage 4 was expected to be completed in June 2011 following a consultation exercise to be held in 2010. Patrick noted that DECC had placed a great deal of information on its website and directed members to that as well as the HSE website (<http://www.hse.gov.uk/newreactors/>).

Patrick Stephen outlined the update to the EC and IAEA BSS. He noted that the Article 31 group had now seen the full draft of the proposed EC BSS. He noted that only one sticking point remained which was the protection of the environment and the relevant sections were now being reviewed by lawyers. This was primarily to do with whether such material fell within the scope of the BSS. Patrick noted that he thought the EC would adopt a draft of the BSS by the autumn of 2010 and that the UK was unlikely to have new regulations, implementing the directive, before 2015.

A copy of Patrick's presentations will be sent to members for their information.

Peter Marsden raised a question that had been asked by the Small Users Liaison Group regarding the use of NDAWG guidance reports. Peter noted that NDAWG stated that if a scoping assessment showed that the dose was unlikely to be above 20 μ Sv then no further refining would be required from the regulators. However, he knows of a particular incident where the regulator had asked for further refinement when the estimated dose was below this level. Rob commented that the EA would also use their cautious model to assess the dose and if that showed the dose could be above 20 μ Sv then the regulator may ask for further information regardless of whether the operator's assessment showed the dose was below 20 μ Sv. Rob did state that EA was following the guidance of NDAWG although some situations may arise where an individual inspector may require further information. Peter was content that this may have been the situation in this case.

Ray Kowe noted that the NDA (radioactive waste management division (RWMD) are putting a Disposal System Safety Case together, which will be externally reviewed from April next year and is due for publication in September 2010.

John Titley noted that the EA GDA consultation would be in May 2010 and that the HPA would be asked to comment on these documents prior to that date.

John Titley also noted that the EA had received 3 applications for disposal of LLW and VLLW. He noted that planning permission for the site disposing of LLW may be granted following a public consultation.

Stuart Hudson noted that the Exemption Order review was ongoing and that comments from the consultation were currently being reviewed. It was hoped that this process would be completed by April 2010 with possibly a further round of consultation at a later date. This may include another workshop.

Stuart Hudson noted that the Scottish HLW policy is currently being prepared for consultation, possibly in June 2010, as the Scottish policy is different from that in place in England and Wales. A workshop is being planned for 2010.

11 NDAWG review (Paper 15-10)

NDAWG Terms of Reference – No changes were proposed and members agreed that the ToR were being met. Regarding ToR number 5 members felt that more publicity for the Group would be obtained if an article was written for the JRP. Mike Thorne agreed to do this.

Action 16.7 Mike Thorne to write an article for the JRP about the work of NDAWG

Mike Thorne also suggested that adding members of SRP to the distribution list of contacts for updates regarding the work of NDAWG would increase the number of people using the guidance provided. He will provide Wayne with a suitable name.

Action 16.8 Mike Thorne to provide Wayne with a suitable name from SRP to whom updates on the work of NDAWG could be sent

NDAWG membership – The steering group had asked a member from CEH if they would like to become a member of NDAWG to replace Philip Day. In principle CEH have agreed to supply a member and will let the steering group know who they have selected before the next meeting.

Future work – It was decided that a presentation on the EMRAS project would be of benefit to members and that an update on the sewer model intercomparison should also be added to both the 17th and 18th meeting. A decision on whether to have presentations at the 17th meeting on progress on new build and the updated principles document will be decided at the next steering group meeting.

Action 16.9 Steering group to add an item to the future work program on the EMRAS project

Regarding the website John Titley noted that as more information was added it was becoming increasingly hard to find old material, for example, to know which meeting contained a paper on a particular area of work. Jane noted that the website would be redone at some point to make it easier to navigate but that no effort was available at this time. It was suggested that more information could be provided within the top level web pages on what underlying reports contained. Wayne agreed to have a look at this.

Action 16.10 Wayne Oatway to review the website and add comments in top level pages to make navigation to reports easier

12 Any other business

The chairperson thanked the speakers and Paul Kennedy and FSA colleagues for organising the meeting, providing lunch etc.

13 Date of next meeting

The 17th NDAWG meeting will take place at FSA in May 2009. Wayne will send an email to members to find a suitable date.

14 Summary of Actions

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Action 15.8 **Tim Parker** to produce a discussion note on accidental releases and CBRN. *Ongoing.*

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NDAWG Secretariat

19th November 2009