

## NATIONAL DOSE ASSESSMENT WORKING GROUP

### SUB-GROUP ON SHORT TERM RELEASES

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7<sup>th</sup> meeting held on 30<sup>th</sup> September 2009. This meeting was held by teleconference.

#### Present

Chair	Rob Allott	EA
Regulators/agencies	Wayne Oatway	HPA
	Justin Smith	HPA
	Paul Kennedy	FSA
	Laurence Austin	British Energy
Industry		
Consultants		
Apologies	Paul Dale	SEPA
	Claire Johnson	Westlakes Scientific Consulting

Rob welcomed Paul Kennedy who is replacing David on this subgroup

#### 1. Minutes of previous meeting 23<sup>rd</sup> February 2009

- Action 5.8** Justin to complete Section 4 on short term releases to air. *Completed.*
- Action 5.13** Clair to supply Justin with a reference for SPADE. *Completed.*
- Action 5.15** Rob to ask members at the main NDAWG meeting if they are aware of any short term release case studies involving actinides. *Completed. No comments received.*
- Action 6.1** Laurence to send Justin any historical AGR blowdown data he has. *Completed.*
- Action 6.2** Justin to ask HPA RPAs about the pattern of cyclotron discharges. *Completed.*
- Action 6.3** All to provide comments on the atmospheric release report to Justin by the end of February 2009. *Completed.*
- Action 6.4** Rob to send Justin a reference/report detailing the discharge from a cyclotron. *Completed.*
- Action 6.5** Justin to send round a redrafted report by 20<sup>th</sup> March for comment. *Completed.*
- Action 6.6** Rob to ask at the next NDAWG main meeting if another volunteer from FSA could be added to the subgroup if the subgroup was to continue. *Completed.*

## **2. Issues arising from the last main NDAWG meeting**

Rob and Justin presented papers on the guidance document and the reports on atmospheric and river discharges at the last main meeting of NDAWG. Based on those presentations, members of NDAWG made several comments. Reference to the notes of the main meeting should be made for these comments. In light of these comments Rob had drafted a note that went through the comments raised and detailed the actions the group would take regarding them. In all cases it was felt that the comments raised could be incorporated within the reports.

In addition, all the actions from the last main meeting of NDAWG placed on this subgroup are now complete.

## **3. Paper on the short term release to atmosphere**

Since the last meeting Justin had updated the report based on feedback from NDAWG members. In this meeting the additional comments raised were:

Laurence questioning the release source term for the AGR. He pointed out that instead of all the radionuclides being released at the same time, in reality the radionuclides would only be released as a result of specific events and such events had no probability of releasing all the named radionuclides together. Laurence pointed out, for example, that sulphur and argon would mostly be released as a peak during the bringing up of the AGR to full power after a blowdown. Iodine, however, could be released as a peak due to the use of failed fuel. For cobalt, only a failed filter would cause a peak release. A discussion was had on whether this information could be incorporated within the report. It was felt that, given the available time, the report should be left as it was and that a sentence be added that stated that the source term used in the case study for the AGR was not realistic but was being used as an illustration.

Laurence raised an issue regarding coastal sites and that the wind direction maybe different during day and night and whether information on such matters would be useful to add to the report. Members discussed this and felt that adding this would complicate matters and would not benefit the report so agreed to leave discussion of such matters out.

### **Section 2**

Justin noted that the number of RSA authorisations in Scotland is missing (paragraph 2.1). He will contact Paul Dale to see if he could provide a number.

Paul noted that the RSA was being revoked in England and Wales next year and so should the report refer to that regulation explicitly? Rob agreed that referring to "regulations" rather than a named act would be best.

### **Section 3**

Rob will send comments to Justin on changing wording to Section 3 regarding releases that occurred over periods lasting several days, in line with what he has added to the guidance document.

## Section 5

Paul noted that ADMS4 was being used in the case studies. He noted, and Justin agreed, that this model was not ideal for such assessments as it was designed for routine releases. However, Justin felt that using the model in this way would not produce significant errors and it was agreed not to change anything.

## Section 6

Rob noted that Section 6 was based heavily on Scenario 1. Scenario 3 was felt to be just as important, especially for small users, and Justin agreed to add more text analysing the results of Scenario 3 (to paragraph 6.12).

## Section 7

Justin will add text on the realism of the AGR source term used in the case study.

Rob also noted that for case study 2 the doses for an annual release source term did not add up to 0.02 mSv and hence, following the recommendations in this report, no short term release assessment would be necessary. Justin would add a sentence to say this and to highlight that the case study was there for illustration.

## Conclusions

Rob felt that the wording in paragraph 8.2 regarding the factor of 2 was a bit strong given that it was based on only 2 case studies. Justin agreed to reword this sentence and base it more on the generic studies.

## Figures

Rob asked whether any of the AGR discharge per month would result in a discharge over 2% of the annual discharge and would therefore prompt a short duration release assessment. Justin said he would look and if necessary add some text to the report on this.

Rob also questioned what the “total” and “R3” and “R4” parts of the bars represented as the totals were less than that shown for R3 and R4. Justin said he would review this graph and perhaps just use total discharge rather than trying to break this down.

Rob noted that for the cyclotron graph the discharges were for positron emissions only and this needs to be clarified in the graphs title.

Laurence and others noted that the units on Figures 10 to 15 were in Sv. All felt that it would be better to use microSv. Justin said he would change this.

## Other comments

Rob suggested that an appendix such as that within the Guidance note detailing the derivation of a source term be added to the atmospheric report. Justin agreed to do this.

Rob asked that any final comments from members of this subgroup be sent to Justin by the 9<sup>th</sup> October so that sufficient time was available to incorporate them and the reports sent to NDAWG members before the next meeting.

**Action 7.1** All to send Justin any final comments on either of the reports or the guidance document before the 9<sup>th</sup> October

#### **4. Paper on the short term release to rivers**

Rob noted that in this report only minor changes had been made since the last meeting. He asked members to send any last comments to him by the 9<sup>th</sup> October.

#### **5. Guidance note**

It was noted that comments made on the atmospheric and river reports need to be carried over into this guidance note. Rob will review these reports to make sure this happens.

Justin asked whether a sentence needed to be added to clarify the time period over which an assessment was carried. For example, the case studies assumed the dose was received in the first year following a release but a normal routine release assessment would consider the dose after 50 years of release to account for build-up in the environment. Rob agreed that a sentence reflecting this assumption should be added.

Rob noted that a member had asked whether information could be added to the report regarding who was expected to carry out such an assessment (the Regulator or an applicant). Rob felt that having this information incorporated within the new flow chart would be the best solution.

#### **6. Any other business**

It was agreed that members of the subgroup do not need to see draft copies of the reports and guidance document again and that when Justin and Rob have made the indicated changes that they should be sent to the main NDAWG group for their review.

At present the date of the next main NDAWG meeting is not known as it has had to be moved. Rob felt that the indicated changes should be made assuming the next main meeting is being held sometime in late November or early December so that draft reports for sending to NDAWG members should be ready by late November.

#### **7. Date of next meeting**

It will be decided at the next main NDAWG meeting about whether another meeting of this subgroup will be held. If required, another meeting will be set up at that time.

#### **8. Summary of Actions**

**Action 7.1** All to send Justin any final comments on either of the reports or the guidance document before the 9<sup>th</sup> October

Wayne Oatway, 30<sup>th</sup> September 2009