

PARTICLES RETRIEVAL ADVISORY GROUP (DOUNREAY)

SUMMARY OF DISCUSSION and RECORD OF RECOMMENDATIONS and ACTIONS

9th MEETING OF THE PARTICLES RETRIEVAL ADVISORY GROUP (DOUNREAY) – 18th July 2012

Members Present:

Prof Alex Elliott (Member) – **AE (Chairman)**
 Prof Tim Atkinson (Member) - **TA**
 Dr George Hunter (Member) - **GH**
 Prof Marian Scott (Member) – **MS**
 Dr Andrew Tyler (Member) - **AT**
 Dr Paul Dale (Technical Secretary) - **PD**

In Attendance:

Ms Joanne Brown (Observer, HPA) - **JB**
 Mr Phil Cartwright (Observer, DSRL) - **PC**
 Mr Stuart Chalmers (Observer, NDA) - **SC**
 Mr Simon Copsey (Observer, DSRL) - **SCo**
 Mr Hugh Fearn (Observer, SEPA) - **HF**
 Mr Jim Gemmill (Observer, SEPA) – **JG**
 Ms Anna MacConnell (Observer, NDA)- **AM**
 Mr Bill Thomson (Observer, DSRL) - **BT**
 Mr Mark Toner (Observer, SEPA) - **MT**
 Mr Andrew Wittall (SEPA) - **AW** (pm only)

Apologies:

Observer, DSG
 Observer, SG

Mrs June Moore (Administration) - **JM**

Agenda Item	Summary of Discussion	Recommendation	Action	Status	Target Date
1 Chairman's Introduction	<p>The Chairman welcomed all present to the 9th PRAG meeting. This meeting had been convened primarily to provide DSRL with feedback and guidance during the offshore retrieval operation.</p> <p>Professor Elliott introduced Simon Copsey (Observer, DSRL), welcomed him to his first PRAG meeting, and invited the Group to provide Mr Copsey with round-table introductions.</p>	<p>The Chairman noted that no response had yet been received from the SG to an invitation to nominate an alternate SG Observer to attend PRAG meetings.</p>			

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1 Chairman's Introduction <i>(continued)</i>	<p>Stuart Chalmers informed the Group that this was the last PRAG meeting he would attend as the NDA Observer. He introduced Anna MacConnell (NDA), who will attend future meetings. Ms MacConnell has been nominated as the Group's NDA Observer, on an interim basis.</p> <p>The Chairman advised the meeting that, at a recent COMARE meeting, the Particles Team was complimented on its work. PC informed the Group of news that Babcock International has recognised the performance of the Particles Team, in particular from a safety aspect, and that the contractor was nominated for a safety award. PC reported that the award trophy had been presented to the personnel 'on site' on the barge and that DSRL considers the award a well-earned accolade.</p>	<p>The Chairman thanked SC for his contributions to the Group and, on behalf of the Members, wished him success in his future career.</p> <p>The Chairman offered the Group's congratulations to the Particles Team.</p>			
2 Minutes	<p>AE informed the meeting that the draft note of the August 2011 Workshop is not yet available and will be considered at the next full meeting of the Group, or by circulation.</p>		<p>Draft document to be prepared. PD/MT</p>	<p>Open</p>	<p>For next meeting / circulation</p>
2.1 Record of Previous Meeting(s) <i>Papers M9/01 and M9/02</i>	<p>The draft Summary of Discussion and Record of Recommendations and Actions from the meeting held on 12th December 2011, M9/01 was accepted without amendment.</p>	<p>It was noted that outstanding minutes from the previous two meetings had been prepared by JM.</p>	<p>December meeting minute to be published on the Website. JM</p>	<p>Open</p>	<p>ASAP</p>

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2.1 Record of Previous Meeting(s) <i>Papers M9/01 and M9/02 (continued)</i>	<p>The draft Summary of Discussion and Record of Recommendations and Actions from the meeting held on 2nd February 2012, M9/02, was accepted with minor amendment.</p>	<p>PC requested minor amendment to the February draft summary note.</p>	<p>February meeting minute to be published on the website, following minor amendment. JM</p>	<p>Open</p>	<p>ASAP</p>
2.2 Actions Arising <i>Paper M9/03</i>	<p>The Tec Sec led the Group through the actions arising from the previous two meetings.</p>	<p>The outstanding action points in Paper M9/03 were considered and noted as closed, superseded or carried forward as ongoing actions.</p>	<p>Actions carried forward or deferred from previous meetings to be recorded as an appendix to this document. Tec Sec & JM</p> <p>It was noted that several outstanding actions from M8, specifically those identified as contributory to the production of the Group’s annual report to SEPA, due at the end of the last FY, had not been met due to a reallocation of resources to more pressing matters. It was recommended that, where appropriate, such outstanding actions would be transferred to the preparation of PRAG’s next report to SEPA, due at the end of this calendar year.</p>	<p>Open</p> <p>Open</p>	<p>For next meeting</p> <p>For next report</p>

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<p>3 Surveys Update – Beaches <i>Paper M9/04</i></p> <p>3.1 Sandside Beach</p>	<p>The Chairman invited DSRL to provide an update on recent onshore surveys.</p> <p>PC gave an oral report of the beach monitoring.</p> <p>DSRL reported that a significant amount of sand had returned to Sandside beach in March, with wind direction feeding accretion, and that the amount of sand on the beach now appears 'fairly normal'. PC advised that particle finds on the beach have been quite sporadic with a further 9 particles retrieved since the last PRAG meeting: 4 in March, 3 in May and 1 in July. One particle was <i>relevant</i>, the others of <i>minor</i> activity. A further particle, detected and retrieved on 14 February, had an 'unusual signal' and was very different from the other particles in radionuclide composition. Information about this unusual particle had been circulated to the Group for Members' consideration and comment.</p> <p>PC reported on the various tests undertaken to determine the potential source of the anomalous particle. He advised that DSRL is now in discussion with SEPA regarding further laboratory examination of the particle. An extensive discussion ensued and various suggestions for a plausible explanation to the origin of this particle were considered.</p>				

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<p>3.1 Sandside Beach (continued)</p>	<p>PD suggested that monitoring on and off-shore was not historically tailored to detect this type of particle, although the beach system is obviously capable of detecting such particles. Consequently, this may not be an isolated particle. PC advised that, of the other nine 'unusual' or anomalous particles retrieved previously (with a different strontium:caesium ratio), eight had been found offshore. In response to a request for comparative testing with these earlier finds, PC stated that all of these 'different' particles had been disposed of in the past, so it was not possible to subject them to identical tests with the recent particle find.</p> <p>MS said that it might be useful to check back over the beach monitoring records for signals recorded during monitoring that are similar, which could perhaps provide more information on how many such particles may be in the environment. PC advised that the operators are aware of, and alert to, this unusual find, but no further particles of this type have yet been detected. He said that they had not encountered anything like this particle before and nothing similar had been identified in the search they had conducted through previous particle analyses. PC stated it was his belief that DSRL is now using the best piece of detecting equipment and the best quality operators.</p>	<p>The Group noted that this particle had very different characteristics from any other particles retrieved and suggested that there may be a separate population of this type of particle. It was also noted that monitoring for such particles had not been factored into the detection criteria in the past.</p>			

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<p>3.1 Sandside Beach (continued)</p>	<p>During the ensuing discussion, it was suggested that, although initial data attributed a high level of activity to the particle (<i>significant</i>), further analysis suggested that it may not be as hazardous as originally thought, as more accurate estimates of its activity were obtained. However, JB expressed concern that such particles could still present a significant hazard. AE suggested that the Group should seek to extrapolate as much additional information as possible from further work on the particle analysis. JG informed the meeting that SEPA is now awaiting the Group's advice, before authorising DSRL to carry out further tests that will result in the destruction of the particle.</p> <p>Further discussion followed on work that could be undertaken to learn more from the anomalous particle.</p> <p>PC informed the meeting that DSRL has now completed 21 months of continuous monitoring of Sandside beach, an arrangement which will cease at the completion of 24 months. Consideration was given to the continuation of this regime. The Group discussed options for a future beach monitoring strategy and acknowledged the importance of clearly identifying the objective for monitoring public beaches; investigative or public reassurance.</p>	<p>Following extensive discussion and deliberation, the Group agreed upon a formal recommendation of the work to be undertaken to characterise this particle and, potentially, other particles of this type</p> <p>During the discussion, it was noted that the sentinel monitoring will continue.</p> <p>It was agreed that the ongoing purpose(s) of the beach monitoring programme would be considered further and fully addressed in the Group's next report to SEPA.</p>	<p>AE agreed to write to DSRL setting out the extent of the work, and full scope of the project, as proposed by the Group at this meeting. AE</p>	<p>Open</p>	<p>ASAP</p>

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3.1 Sandside Beach <i>(continued)</i>	PC advised the Group that the Sandside Estate is currently on the market to be sold, but the beach is not included in the sale and he reassured the Group that throughout the process DSRL will continue to have access for monitoring.	It was noted that the issue of beach monitoring would also be raised under item 4 on today's agenda.			
3.2 Dounreay Foreshore	<p>PC reported on monitoring at other beaches. He said that access to some parts is 'difficult' due to access issues but DRSL will resume surveys as soon as it can.</p> <p>Two particles had been retrieved from the foreshore; one <i>relevant</i> and one <i>minor</i>, but there is very little sand, and no evidence of significant accretion, especially on the East foreshore.</p> <p>PC informed the meeting that, due to the implementation of 'security improvements', access to the beach has been difficult recently. He advised the Group that although DSRL had been able to continue statutory checks, it had not been possible to actually probe the beach during this time to determine sand depth.</p> <p>PC led the Group through other methods used to determine the depth of sand and provided information on the current situation.</p>	It was noted that, although this action is still outstanding, visual checks and photographs suggest that some sand may have returned to the areas originally stripped.	It was agreed that DSRL would carry out test measurements to establish the current depth of sand. DSRL/PC	Open	When possible

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3.3 Dunnet Beach	Routine surveying at Dunnet has produced no particle finds.				
3.4 Others	The Group were informed that there is no sand at Brims Ness.				
4 Dounreay Authorisation	<p>The Chairman invited JG to address the meeting on this item. JG informed the meeting that SEPA was considering potential changes to Dounreay's authorisation which could affect the beach monitoring programme. SEPA will conduct a public consultation to obtain comments from all interested parties.</p> <p>PD stated that the potential changes to the authorisation could include opinions on future beach monitoring, which is why further information on the 'strontium' particle found recently is an important element for consideration.</p> <p>The meeting was informed that SEPA will review all aspects of the potential programme of requirements, including the objective(s), frequency, detecting capabilities and longevity of future monitoring.</p>	The Group noted the scope of the SEPA review and awaits further information. It was agreed that PRAG would provide input via any consultation response.			
5 SSE Consultation on Undersea Cable from Orkney to Caithness	The meeting was advised that there has been no further contact directly to TA or PC.	The Group noted that the SSE appears to have the advice it requested for the route and that no further action is required.			

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<p>6 Offshore Retrieval Operation</p>	<p>The Chairman invited DSRL to provide the meeting with an update on the retrieval operation to date. BT led the Group through a presentation summarising the results of the 22.3 Ha surveyed during the current season. He also provided the Members with the weekly data summary up to midnight on 15 July.</p> <p>PC advised the Members that DSRL would continue to provide them with weekly update reports as and when available and was seeking PRAG's guidance on the work undertaken so far.</p> <p>DSRL confirmed that coverage of areas 9, G and A were now complete. Surveys of areas B and C were underway and, once completed, the intention was to move to area F (excluding the section of this area previously covered), commencing at the south-east side, to determine the eastward extent within section F.</p> <p>The Group discussed the proposed plan for the remainder of operational time and budget, including the importance of delineating the easterly extent in area F.</p>	<p>The Group noted that DSRL was pleased to report that fishermen working outside the exclusion zone had been very co-operative during the off-shore operation.</p> <p>The Members also noted the operational down time lost due to adverse weather conditions (33%) and equipment breakdown (19%) during this year's campaign.</p> <p>It was agreed that further consideration and analysis of this season's results would be undertaken after completion of the offshore operation and additional processing of final data.</p>	<p>Weekly reports to continue to be circulated to Members for comment. DSRL</p>	<p>Open</p>	<p>Ongoing</p>

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6.1 2012 ROV Results	<p>The Chairman led the Group through the data summary provided by DSRL. Various aspects of the results of the particle recovery operation to date were considered, including the evidence of possible deviations from the numbers predicted in the original model. The potential for residual populations in some areas was discussed, together with the possibility of particles becoming buried or breaking up.</p>	<p>Following extensive discussion, the Group recommended that area F should have a higher priority than E. It was suggested that area E could be covered if there is sufficient operation time; however, a limiting factor in covering these areas might be the currents encountered in deeper waters.</p>			
6.2 Comparison with Previous Operation			<p>It was agreed that the Group will consider this at its October meeting, once all 2012 data is available.</p>	Open	October meeting
6.3 Conclusions	<p>DSRL asked the Group to interpret the retrieval data and the implications for future work. Various opinions were considered by the meeting on the conclusions which may be interpreted from the results achieved to date. The best use of the remaining offshore retrieval resource was discussed at length.</p>	<p>After extensive consideration of various possible implications of the results obtained to date (including the re-establishment or validation of contours during the very limited operational time remaining in the current campaign), the Group agreed on a proposed recommendation for the areas of work to be prioritised during the final stages of the 2012 retrieval operation.</p>	<p>DSRL agreed to proceed with the completion of the remainder of the offshore retrieval operation as recommended by the Group. DSRL</p>	Open	Ongoing
NB:	<p>Mr Andrew Whittall (SEPA) joined the meeting post-lunch for agenda item 8.</p>				

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<p>7 Preparation of Group's 2011 and Final Reports to SEPA</p>	<p>The Chairman informed the meeting that the Chairman and SEPA had taken the decision not to proceed with the Group's 2011 annual report. He explained that PRAG's currently-contracted work will conclude at the end of this calendar year and it will be necessary to incorporate information from 2011 into a combined report at the end of 2012. AE advised that, depending on what is found, it could be the final report from this Group.</p> <p>It was suggested that there will be a requirement for some conclusions after this year's retrieval campaign which DSRL can convey to the NDA.</p> <p>AE confirmed that when a full two years of continuous monitoring is completed this autumn, the Group will wish to review the overall results. The future monitoring of other beaches was also considered.</p>	<p>During discussion, it was noted that there is not a huge amount of time for the Group to produce a report covering two operational seasons. It was also noted that the subject of beach surveys will be included in the report and there will be two years' work of continuous monitoring on Sandside to be considered, interpreted and conclusions extracted there from, all for inclusion in the end of this year's report.</p> <p>MS requested that the due date for production of a comprehensive report be changed from "end of this calendar year" to "end of current FY".</p> <p>The Group noted that recommendations for monitoring of other beaches will be taken into consideration in the SEPA consultation document for reviewing the programme of future monitoring on beaches.</p>			

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<p>7 Preparation of Group's 2011 and Final Reports to SEPA <i>(continued)</i></p>		<p>The Group recommended that the SEPA review should include the monitoring programme required for other beaches, as well as for Sandside.</p>			
<p>8 Decommissioning of Old Diffuser Chamber and Liquid Effluent Discharge Tunnel</p>	<p>The Chairman invited JG to speak to the Group. JG explained that DSRL have produced a management plan for the decommissioning of the ODC and associated pipework in the LEDT and, as requested by SEPA, prepared an Environmental Safety Case (ESC) to support that plan. SEPA is reviewing DSRL's submissions to inform a regulatory review of DSRL's plans and provide advice on where the ESC and decommissioning management plan might benefit from improvement. JG then introduced Andrew Whittall (AW), from SEPA, to brief the meeting on the review to date and offer the Group the opportunity to consider its advice, in light of concerns associated with the ODC raised in DPAG minutes and reports, and highlighted in DPAG's Third Report.</p> <p>AW thanked the meeting for allowing time on its agenda for this discussion and invited the Group to ask any questions or request clarification during his briefing.</p>	<p>During AW's briefing, various points were raised and discussed and several opinions proffered.</p>			

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<p>8 Decommissioning of Old Diffuser Chamber and Liquid Effluent Discharge Tunnel <i>(continued)</i></p>	<p>AW presented a verbal report of the historical and current situation, which he and a SEPA colleague have been reviewing since January this year.</p> <p>His report encompassed:</p> <ul style="list-style-type: none"> • the history; • structural integrity of the diffuser system; • SEPA's recently-sourced peer review of a Jacobs Babbie report; • summary of the ESC; • SEPA's initial view; • SEPA's revocation policy and this ESC - in the context of a site-wide ESC. <p>AW thanked the Group for their consideration and advice.</p>	<p>The Group noted AW's summary from a Jacobs Babbie report to DSRL (in 2006) and the information available from SEPA's recent acquisition of a peer review of the Babbie report, commissioned from Sanderson Watts Assoc.</p> <p>There followed an extensive discussion during which the Group considered both historical and new information available. During the Group's deliberations, various views and alternatives for resolving this issue were tabled and considered. PRAG's summary recommendation for future action was conveyed to SEPA.</p>			
<p>9 Future PRAG Work Programme</p> <p>9.2 Future Meetings</p>	<p>AE suggested that the Group's immediate work programme had been fully considered and identified during the meeting.</p> <p>The Chairman summarised the programme of meetings required for the remainder of the calendar year to meet the Group's work schedule.</p>	<p>The Group noted that the provisional dates held for meetings during October, November and December</p>	<p>As discussed and agreed above.</p>	<p>Open</p>	<p>As noted above</p>

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9.2 Future Meetings <i>(continued)</i>		(as previously circulated to the Group by JM) were agreed and confirmed as: 24 October (Glasgow) 13 & 14 November (tba) 12 December (Glasgow)	Three future meetings to be held to facilitate production of an end-of-year report; JM to arrange one-day meetings for the October and December dates and a two-day meeting in November. JM	Open	ASAP
10 Any Other Business	There were no items raised under any other items of competent business.				
11 Acting Chairman's Closing Summary	AE thanked those present for their attendance and contributions to the meeting.				

Acronyms

DPAG	Dounreay Particles Advisory Group
DSG	Dounreay Stakeholders Group
DSRL	Dounreay Site Restoration Limited
ESC	Environmental Safety Case
FY	(SEPA) Financial Year: 1 st April 2010 to 31 st March 2011
HPA	Health Protection Agency
LEDT	Liquid Effluent Discharge Tunnel
NDA	Nuclear Decommissioning Authority
ODC	Old Diffuser Chamber
PRAG(D)	Particles Retrieval Advisory Group (Dounreay)
RCLR	Radioactive Contaminated Land Regulations
ROV	Remotely Operated Vehicle
SG	(The) Scottish Government
SEPA	Scottish Environment Protection Agency
SSE	Scottish & Southern Energy