

**DOUNREAY STAKEHOLDER GROUP
ENVIRONMENT SUB GROUP**

DSG/ESG(2009)M003

**MINUTES OF THE DSG ENVIRONMENT SUB GROUP MEETING HELD ON
WEDNESDAY 16TH SEPTEMBER 2009 AT 1330 HOURS IN THE PENTLAND
HOTEL, THURSO.**

Present: George Farlow Highland Council (sub group chair)
Alastair MacDonald DSG Chair
Hamish Pottinger CAND
Ian Webster Buldoo Residents Group
Chris Jones SEERAD

In addition: June Love DSRL (Secretary)
Tony Wratten Director of Assurance, DSRL
Phil Cartwright DSRL (for item 5)
Roy Blackburn NDA

Observing: Jim Forde NDA Graduate

MINUTES

1. WELCOME AND INTRODUCTIONS

George Farlow welcomed everyone to the meeting. Before starting Councillor Farlow declared an interest in the Shetland Island Council letter which would be tabled under the Particles progress report. As the Highland Council representative on Kimo UK, which is part of KIMO International, he has an association with John Mouat who is the KIMO co-ordinator. Councillor Farlow had asked Alastair MacDonald to lead discussions on this item at the appropriate time.

2. APOLOGIES

Apologies were received from:

David Brown, Orkney Islands Council
Rick Nickerson, Shetland Island Council
Rosemary Thompson, North Highland College
Rod Johnstone, Scrabster Harbour Trust
Pauline Craw, National Health Service
Silvia Batchelli, ERI
Irina Foss, ERI
Roger Wilson, SEPA

It was noted that Silvia Batchelli and Irina Foss had either completed or were soon to complete their studies at ERI and would be leaving the area. Therefore they would no longer represent ERI at DSG. Replacement members for ESG for both were being pursued.

3. MINUTES OF LAST MEETING

The minutes of the last meeting (DSG/ESG(2009)M002 refers). Ian Webster asked for a minor change to be made to the minutes relating to access of the foreshore. This amendment was agreed.

ACTION: DSG/ESG(2009)M003/A001: Secretary to amend minutes with comments relating to the access to the foreshore.

Following this amendment members agreed the minutes were a true reflection of the meeting. The minutes were proposed by Alastair MacDonald and seconded by Hamish Pottinger.

4. PROGRESS ON ACTIONS

See Appendix 1 for progress on actions.

George Farlow noted that there was a Government consultation on zero waste and there was an opportunity for members to respond.

ACTION: DSG/ESG(2009)M003/A002: Secretary to obtain copy of Government consultation on zero waste and circulate to members to consider response.

5. PARTICLES UPDATE

Phil Cartwright, DSRL provided an update. DSG(2009)C072 refers. Of note:

- Alastair MacDonald will represent DSG at the Particles Retrieval Advisory Group (Dounreay). A meeting was scheduled to take place in November.
- On the progress of the off-shore particle retrieval project the objective for this year was to monitor a continuous area of 7.5 hectares at the west end of the main plume, to generate improved information on the depths and populations of the particles as well as identifying potential improvements to the particle retrieval system of the remotely operated vehicle.

The clean-up work started this year on 1st June and covered the entire areas as previously agreed by PRAG(D). The progress report details the number of particles retrieved and identified.

Phil noted that the information gained for this years work has been given to PRAG(D) and will be utilised by DSRL to help to determine an improved specification for use in preparation for next years work. If a comparison is made on the particles already recovered against the estimates of particles remaining in the plume there has already been a significant difference made. It is important to continue the progress being made, but there is no doubt that the project will learn a lot as the area of seabed continuously monitored is increased

George Farlow asked what the age of these particles were. Phil responded that dating of MTR particles indicated they were produced from elements irradiated in test reactors during the 1960s, but this did not necessarily mean they left the site at this time. It is known that DFR particles were produced in the late 1970s. Hamish Pottinger noted that there appeared to be a cluster of particles to the east and west of the discharge pipe at almost the same distance. He asked about the ages of these. Phil responded that there was no indication of a difference in age.. The overall effect of the tide moves particles mainly west to east but there is also the effect of the weather and the influence of the rocks which seems to promote a stream to the west which takes particles towards Sandside which also has to be taken into account. The thought is that the weather is also influential in terms of movement to the west and it is the cumulative effect of all these which keeps the overall plume moving in both directions. The ROV has gone beyond 30 metres water depth but it has not found particles– it appears that the effect of the weather on the

waves keeps the particles inshore while tidal eddies take them to the west. The intention for the off-shore campaign over the next few years is to move down the plume to fill in continuous blocks towards the east. PRAG will consider the information gained and are likely to review the need for further monitoring.

George Farlow stated that he was pleased to see that the clean-up programme was being considered from both a science and engineering view point. He thought that the detection and recovery of these particles was a good thing and the fact that they were here in the first place was historic. He hoped that in a year's time DSRL would be providing the group with a map showing another area monitored and another number of finds retrieved. Phil Cartwright responded that he was unable to put a firm figure on the number of particles which will be detected and retrieved but the site would continue to do the best they could with this historical problem. PRAG had been set up to make sure the work is independently assessed and to decide on how to determine when enough has been done. He firmly believed that the approach being taken was the right one and that a lot more activity would be retrieved from the seabed. He also stated that this was not a precise science which makes it impossible to say exactly what the final outcome will be.

The project is one of the sites higher priorities and is also noted in the NDA business plan as a priority for the Dounreay site.

- Monitoring of the beaches was also outlined. The group noted that no monitoring had been undertaken at Sandside beach since the last report in June.

Alastair MacDonald asked what value there was in monitoring Sandside when the site could not obtain regular access to allow the production of improved data. Phil Cartwright responded that his position was that continuous monitoring for an extended period was required to produce consistent data and allow the effect of the natural forces on particle arrival rates at Sandside to be accurately quantified. Negotiations with the landowner were continuing but was not something that DSRL was directly involved in. He emphasised that from a health protection point of view 6 monthly monitoring of the entire beach had been recommended as the minimum but this was difficult to achieve in practice, due to tides and weather.. DPAG had not considered that this was frequent enough to satisfy the requirement to promptly detect and retrieve particles and had recommended fortnightly monitoring to allow a consistent dataset to be produced for review..

George Farlow asked whether members considered it would be worthwhile thanking those landowners who allowed unrestricted continuous monitoring at the DSG meeting. This was agreed.

- Following review of a recommendation from DPAG a coastal survey was undertaken from the east end of Sandside Bay, eastwards along the coast, to Crosskirk, and included the Dounreay foreshore. All accessible areas with sand and shingle were monitored.
- A particle in the minor category (and an area of contamination) was detected and removed from the area designated for the new low level waste facility. The Food Standards Agency has confirmed that the finds pose no concern with respect to the food chain.

Hamish Pottinger asked whether the particle find could have come from the shaft. Phil Cartwright stated that during the investigation he had looked at every likely cause going back to old incident reports dating back to 1961 which included the shaft

explosion. While it could never be proved that the shaft explosion was not the direct source of this particle it would be incredibly unlikely.

George Farlow noted that SEPA had sent a statement on the detection of the particle and had asked that this be read out to the group. The statement was as follows:

SEPA has noted the content and conclusions of the DSRL investigation regarding the detection and recovery of a DFR fragment from the area of the planned new LLW facility. SEPA would concur that the most likely mechanism for the transport of the fragment is wind blown transportation. In SEPA's view the fragment is most likely to have blown from Landfill 42 probably in the mid 90's when the seaward face of the landfill was being pulled back on to the landfill. SEPA is in discussion with DSRL regarding the long term future for this disused landfill. On health and environmental protection grounds further monitoring of land beyond that carried out to date by the site would not be thought necessary at this time. We will also be considering this further under the Radioactive Contaminated Land assessment that SEPA is currently carrying out, as announced at the last DSG meeting.

Phil Cartwright noted that the survey has now been completed and the investigation report had gone to SEPA. There were some other finds of low level contamination associated with the runway but the site were already aware of these. No other finds of this type were detected.

Ian Webster asked whether the survey included the whole development site. Phil responded that the entire site had been monitored.

Hamish Pottinger felt that it was a positive reflection on DSRL to monitor the area.

Ian Webster asked what would happen when excavation work begun for the low level waste facility. Phil Cartwright responded that monitoring would take place during excavation work.

Ian Webster also noted that a minor particle had been found on landfill 42. Phil responded that Landfill 42 was used from the 1950s where spoil from the building of Dounreay was disposed off. Landfill 42 was authorised for non-radioactive material. When the landfill was moved away from the coast in the late 1990s some finds were detected which included 2 fuel particles. Since then the Landfill has been monitored a number of contaminated spots, stones, particles, fossils, etc have been detected. The recent find was a minor MTR particle. A Wratten stated the activity was lower than the source found in a smoke detector. Information is currently being put together on landfill 42, including further sampling and DSRL will make the case to SEPA on the options for dealing with this area.

Alastair MacDonald took over the chair to discuss the letter received from the Shetland Island Council. DSG(2009)C071 refers. DSRL had since responded to Shetland Island Council and DSG(2009)C073 refers.

The update and discussion relating to the progress on particles clean-up appeared to address most of the concerns raised by Shetland and any other issues will be raised by the Shetland representative at the next DSG meeting if required.

6. UPDATE REPORTS

- DSRL update: Paper 21 refers. Tony Wratten provided a verbal update:

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- The programme is continuing very much to plan.
- Hazard reduction continues at DFR with 15% of the liquid metal now destroyed.
- At PFR there is a lot of dismantling work ongoing.
- Decommissioning work continues to progress well in the fuel cycle area.
- Lord Hunt, Energy Minister, visited site and was impressed with what he saw.
- The UKAEA sale is ongoing and expected to be announced shortly.
- SEPA update: Paper 23 refers. Of note:
 - DSRL has submitted an application to surrender the pollution, prevention and control (PPC) permit regulating the recovery of uranium metal from uranium containing waste streams.
 - SEPA is considering a response to the warning letter from DSRL on tritium discharges from the Sodium Inventory Destruction Plant.
 - SEPA continues to keep under review the work ongoing for the low level waste facility.
 - Of potential general interest – the final phase of The Water Environment (Oil Storage) (Scotland) Regulations 2006 comes into effect by April 2010. These regulations now control the storage of agricultural fuel oil – while domestic premises with less than 2500 litres are exempt agricultural, industrial and commercial premises are not. Details can be found on the SEPA website.

As there was no SEPA representative in attendance there was no further update.

- NDA update: A verbal update was provided by Roy Blackburn, NDA. Of note:
 - NDA's low level waste strategy consultation was completed on Friday 11 September 2009. Fifty responses were received and these are currently being reviewed as part of the process to finalise the LLW strategy.
 - NDA welcomes DSRL's 5 Star Award from the British Safety Council, achieving an excellent score of 97.1%.
 - DSRL has achieved 2 million man-hours without a lost time accident. In addition, the site's Fire and Rescue Team has gone 9 years without a lost time accident.
 - Positive feedback from the NII Deputy Chief Inspector following his recent visit to the site. He recognised the good progress being made on decommissioning and acknowledged the professional approach adopted by site personnel.
 - Following a joint NII/SEPA inspection, the Nak Disposal Plant received agreement from NII to continue processing active NaK whilst they prepared the Licence Instrument to proceed from active commissioning to routine operations. This is a good example of collaborative working between DSRL

and Nil and meant that the NDP could continue to reduce the major hazard on the site without the plant being shutdown.

- Alistair Wivell, NDA non-executive Board member visited site and provided positive feedback on progress and DSRL performance.

George Farlow noted that excellent achievement of the 5-star award and safety record. Members agreed that congratulations to the workforce and contractors should be tabled at the DSG meeting in the evening.

ACTION: DSG/ESG(2009)M003/A003: ESG sub group chair to table congratulations to the workforce and site contractors for achieving a good result on safety performance.

7. DISCHARGE AUTHORISATION

Tony Wratten, DSRL tabled a presentation and a summary document. (See Appendix 2 for the presentation). Of note:

At present DSRL has three authorisations – gaseous, liquid and solid – which were linked into what Dounreay was doing in the 1990s and because of the changing focus of the site these are now out of date.

An application for a new authorisation focussing on decommissioning up to the interim end point will be sent to SEPA by the end of September. Following that SEPA will consult on the application (2009-2011) and will then issue new authorisation early in 2012.

The authorisation covers the decommissioning activities for the site and as a result will have peaks and troughs. For example the old reprocessing plant decommissioning means discharges will go up for a short period of time while following the destruction of the liquid metal at DFR discharges will reduce. The new application has tried to set out the best estimates up to 2025.

In all cases discharges, except tritium, will be lower by a factor of 10. Tritium will rise slightly which PFR reactor decommissioning is carried out. Tritium is a gas which makes it difficult to capture through filtration.

When the application is put together the dose to critical groups is considered and there are strict limits placed on this. The site also has to demonstrate best practice.

A summary paper “Information in support of an application for authorisation for the disposal of liquid, gaseous and solid radioactive wastes from Dounreay, 2009” was tabled for members to read at their leisure. Any questions arising from this would be directed to the secretary who would ensure responses from the site would be forthcoming.

ACTION: DSG/ESG(2009)M003/A004: Tony Wratten to provide secretary with electronic version of summary information in support of the application for authorisation from Dounreay.

George Farlow asked whether lowering the levels would require the site to lengthen the site decommissioning programme. Tony Wratten responded that unless SEPA gave the site much lower limits than the site was asking for it would impact on the programme. The application takes into account the modelling work carried out for the site based on the assumption that there will be certain projects that run in

parallel. The application requests slightly higher levels of discharge authorisation to allow decommissioning work to continue.

8. HERITAGE STRATEGY UPDATE

Tony Wratten, DSRL provided a brief update. The second draft of the strategy document is now prepared and a summary of main issues is currently being reviewed by NDA and DSRL management for their approval. Discussions with Historic Scotland will take place in October, before embarking on a stakeholder consultation programme over the winter. This will include a presentation to the ESG.

9. ANY OTHER BUSINESS

- DSG(2009)C070 refers to the HSE's determination for the construction and operation of the low level waste repository. The NII have confirmed that under the Nuclear Reactors Environment Impact Assessment for Decommissioning Regulations 1999, they have made a determination that an environmental impact assessment, further to that which was provided for the Town and County Planning application is not required under the Regulations for the change to the decommissioning project to build a new low level waste repository at Dounreay.

There being no further business the meeting was closed.

George Farlow

Environment sub group chairman

19th September 2009

APPENDIX 1 – PROGRESS ON ACTIONS

ACTIONS ARISING FROM THIS MEETING (SEPTEMBER 2009)

M003/A006: Secretary to obtain copy of Government consultation on zero waste and circulate to members to consider response.

M003/A008: Tony Wratten to provide secretary with electronic version of summary information in support of the application for authorisation from Dounreay.

ACTIONS ONGOING FROM PREVIOUS MEETINGS

M002/A014: DSRL to provide a presentation at next ESG and DSG on the application for new discharge authorisation. *Action ongoing – presentation taking place at ESG in September but will be held over until the December meeting for DSG.*

M001/A018: ESG to write to Scottish Government and HSE to stress that a date for a decision on whether the low level waste facility should be licensed was given greater priority to allow a decision to be made. *Action ongoing – Scottish Government have responded as follows: “There are currently actions outstanding arising from the last meeting with HSE and other interested parties which require to be completed but due to other priorities in each of the organisations we have not been able to progress this matter as quickly as we would have wished. The Scottish Government will continue to work closely with HSE and others to progress the issue of licensing facilities such as that planned for Dounreay”.*

M015/A021: Secretary to put heritage strategy presentation on September DSG agenda. *Action ongoing - This will come forward at a future meeting once project team has developed strategy and discussed with Historic Scotland. Updates will continue at ESG until timetable for process and engagement is finalised.*

M016/A014: Doug Graham to consider how best to present the information on environmental aspects and the frequency of this report. *Action ongoing – work is underway to provide information and will be taken at next ESG meeting for comment.*

ACTIONS COMPLETED SINCE JUNE 2009 MEETING

M001/A002: DSRL (Simon Middlemas) to set up local liaison meeting with reps from Buldoo Residents Group as soon as possible. *Action complete: The first meeting is scheduled for 8th July and will have representation from Caithness West Community Council, Buldoo residents, near neighbours and DSG. Bob Earnshaw is the DSG representative for this meeting. [Secretary’s note: the meeting will now take place in November due to the unavailability of attendees].*

M001/A005: DSG members to write to MSP to try to affect progress with the Scottish land registry. *Action complete – The NDA has now registered the land with the Scottish land registry. The process of first registration takes some time in Scotland and given the complexity of this application it is not expected that this will show up on a search of the land registry for the next couple of year. DSG(2009)C075 refers.*

M002/A013: DSRL (Tony Wratten) to provide a diagram to show predicted future discharges. *Action complete – combined with discharge authorisation presentation.*

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M002/A003: Secretary to contact Nigel Canty to ensure that he was available to provide an update on the future of Vulcan (addressing list of questions outlined in DSG(2009)C021. *Action complete – email sent to N Canty on 25th May 2009 and confirmed.*

M002/A004: Secretary to write to all DSG members with reference to representation on the DSRL/Local Community Liaison Group. *Action complete – email sent to DSG members. Bob Earnshaw will be representative with Derrick Milnes as deputy.*

M002/A008: Alan Coghill to write to Buldoo residents outlining what activities is likely to be undertaken over the next 2-3 months to ensure there is no void of information while the liaison group is being set up. *Action complete – letter been sent.*

M002/A010: Secretary to write to Nick Blowfield (Orkney Island Council) to thank him for his contribution to the environment sub group and to DSG over the past year. *Action complete – DSG(2009)C062.*

M002/A011: Phil Cartwright to ensure that the Dunnet landowners are given prior notice before monitoring was undertaken at Dunnet beach. *Action complete – this had previously been done prior to carrying out a full survey of the beach but the procedure will be amended to reflect notification in advance of the strandline surveys also.*

M002/A012: ESG members to consider representation at the Particles Retrieval Advisory Group (PRAG). *Action complete – Alastair MacDonald will represent DSG at these meetings.*

M002/A015: All DSG members to provide views on NDA's consultation on low level waste strategy to the secretary. *Action complete – all comments have been collated.*

M002/A016: Secretary to collate all responses to NDA's consultation on low level waste strategy and draft response for endorsement by DSG members before submitting to NDA. *Action complete – see DSG(2009)C063.*

M003/A005: Secretary to amend DSG/ESG(2009)M002 with correction identified. *Action complete – minutes were amended on 19th September 2009.*

M003/A007: ESG sub group chair to table congratulations to the workforce and site contractors for achieving a good result on safety performance. *Action complete – this was done at DSG on 16th September 2009.*

APPENDIX 2 – DSRL DISCHARGE AUTHORISATION PRESENTATION

RSA AUTHORISATION TO IEP

DSRL SITE NEEDS

Gaseous

Liquid

Date: 14 September 2009



Dounreay Site
Restoration Ltd

2

RSA AUTHORISATION TO IEP

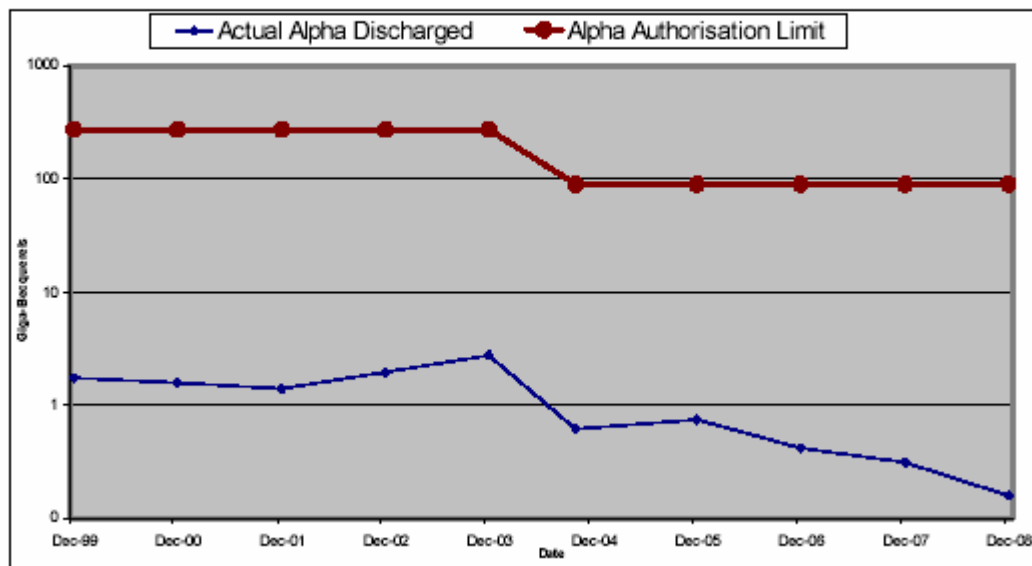
- Extant Authorisation in 3 parts
 - Gaseous Certificate RSA/N/50010/99 as varied
 - Liquid Certificate RSA/N/50011/99 as varied
 - Solid Certificate RSA/N/50012/99 as varied
- Based on a 1993 application to cover
 - Reactor Operation
 - Fuels reprocessing
 - Nuclear material recovery
 - Limited decommissioning

RSA AUTHORISATION TO IEP

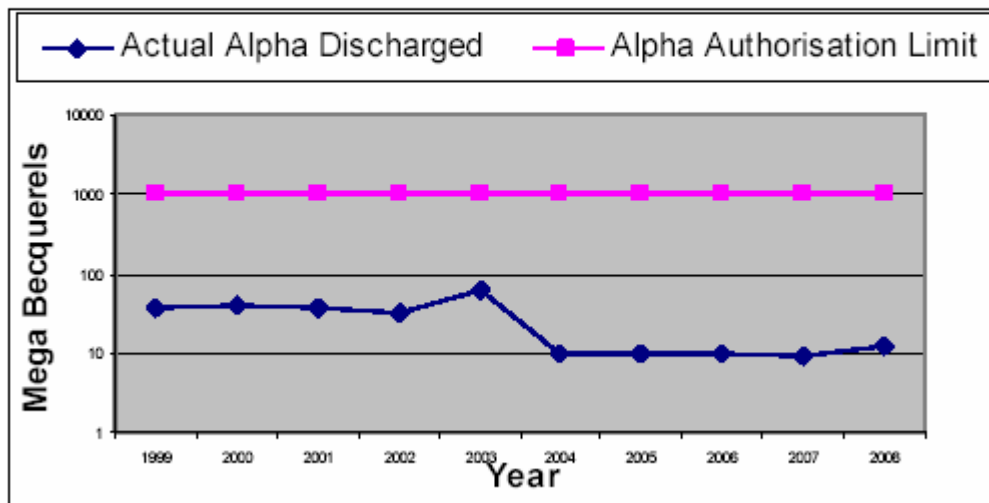
- Application is to be made to SEPA for a “New Authorisation” that is focused on decommissioning the Dounreay site up to the IEP
- The Application Programme

August	Application submitted to DEC	COMPLETE
August/Sept	Revisions and finalise application	COMPLETE
Mid September	Application signed off by Company Secretary	
End September	Application sent to SEPA	
2009 – 2011	Consultation on application	
Early 2012	SEPA issue new RSA Authorisation	

Historical Liquid Alpha Discharges



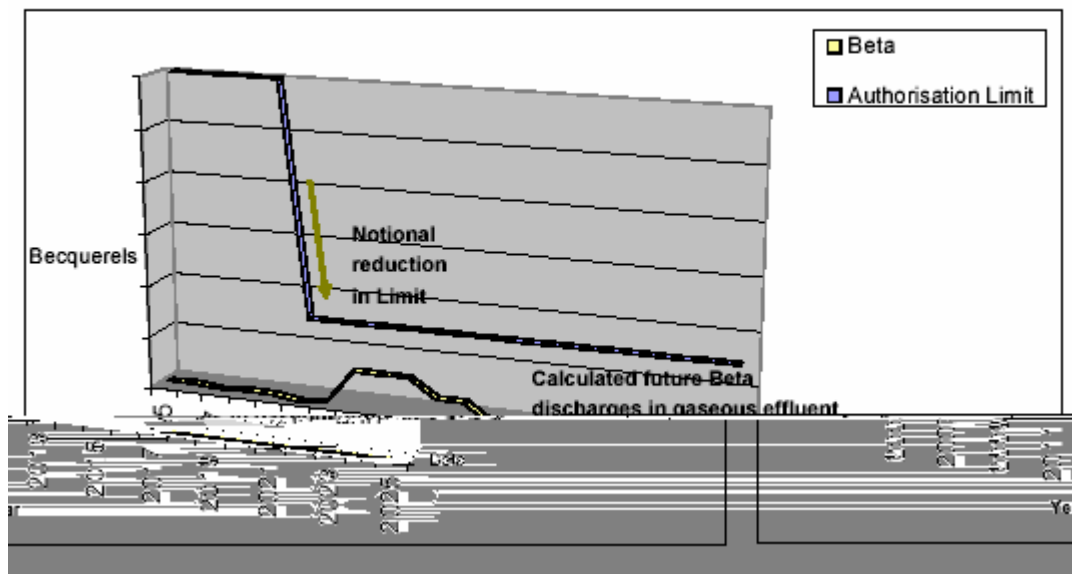
Historical Gaseous Alpha Discharges



Decommissioning the Site

- Decommissioning is a project-based activity
- Leads to peaks and troughs in the discharge profile
- Dounreay anticipates the new RSA Authorisation limits will take account of the peaks

Future Gaseous Discharges compared to a notional lower limit



Future Liquid Discharges compared to a notional lower limit

