

**DOUNREAY STAKEHOLDER GROUP
ENVIRONMENT SUB GROUP**

DSG/ESG(2009)M001

**MINUTES OF THE DSG ENVIRONMENT SUB GROUP MEETING HELD ON
WEDNESDAY 18TH MARCH 2009 AT 1330 HOURS IN THE PENTLAND HOTEL,
THURSO.**

Present:	Alastair MacDonald Chris Jones Hamish Pottinger Ian Webster Rick Nickerson Irina Foss Silvia Batchelli	DSG Chair SEERAD CAND Buldoo Residents Group Shetland Island Council ERI ERI
In attendance:	June Love Tony Wratten Phil Cartwright Graham Beaven Roy Blackburn Roger Wilson	DSG Secretariat, DSRL Director of Assurance, DSRL DSRL (item 6) DSRL (item 6) NDA SEPA

MINUTES

1. WELCOME AND INTRODUCTIONS

Alastair MacDonald welcomed everyone to the meeting and intimated he would be chairing the meeting in the absence of George Farlow.

2. APOLOGIES

Apologies were received from ESG chairman, George Farlow (Highland Council), Pauline Craw (NHS), Nick Blowfield (Orkney Islands Council) and Sandy Mackie (Scrabster Harbour Trust).

3. MINUTES OF LAST MEETING

DSG/ESG(2009)M013 refers. Three amendments were tabled at the meeting:

Page 2: M016/A013 – Secretary to ask Roger Wilson to clarify SEPA's responsibility in relation to environmental aspects for the Dounreay site at the next meeting. The second last sentence in the paragraph below should read "SEPA has no regulatory responsibility for the accreditation but does provide advice and encouragement for continuous improvement."

Page 3: Under the SEPA report: - first para which starts "Roger Wilson noted" should read "..... separate article 37 submission **is in preparation** for the proposed low level waste facility."

Page 6: Under the All waste BPEO section – para beginning "Roger Wilson also noted" Last sentence should read "This could have an impact on the Dounreay waste for some wastes as a potential route for disposal."

ACTION: DSG/ESG(2009)M001/A001: SECRETARY TO AMEND MINUTES DSG/ESG(2008)M013 TO REFLECT AMENDMENTS AS NOTED IN MINUTES.

Rick Nickerson asked for clarification on the waste streams which may have the potential to be sent to Sweden for smelting. Roger Wilson stressed that because Scottish Government had approved MOD's authorisation to send metals for smelting it was something that Dounreay could now consider and that nothing had been decided. Tony Wratten agreed to provide information on the waste streams that have the potential for smelting.

ACTION: DSG/ESG(2009)M001/A002: TONY WRATTEN TO PROVIDE DETAILS OF THE WASTE STREAMS WHICH HAVE THE POTENTIAL TO BE SENT TO SWEDEN FOR SMELTING.

Rick Nickerson also asked that the DSRL team be thanked for trying to get to Shetland to provide a presentation on waste issues to Shetland Island Council. Because of weather conditions the trip was cancelled and a new date was currently being identified.

4. ACTIONS ARISING

Progress on actions are provided in Appendix 1.

Action M015/A017: ESG to ask NII whether the proposed low level waste facility will be a licensed site. Following the last DSG meeting where Scottish Government and NII were present it was apparent that there was further discussion required before a decision would be reached. Scottish Government were asked to provide an update as soon as possible and had sent the following response:

"The Scottish Government is taking part in preliminary discussions with the Department for Energy and Climate Change, Welsh Assembly Government, Health & Safety Executive, Scottish Environment Protection Agency, Environment Agency and Better Regulation Executive to define the term '**Bulk quantities**' under the Nuclear Installations Act 1965.

Defining the term will clarify the scope of the Act with respect to installations designed or adapted for the storage and/or disposal of radioactive matter.

Until the discussions are complete it is not possible to speculate what sites may or may not be licensed, however, any proposal for licensing will be proportionate and is unlikely to include low risk sites.

The Dounreay Stakeholder Group will be kept informed of developments."

Ian Webster stated that this was absolutely unsatisfactory and felt that from day 1 the process for the low level waste facility was being made up as it went along. He stated that a date for a decision was required and that DSG should make this point.

ACTION: DSG/ESG(2009)M001/A003: 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.

Roger Wilson noted that no matter what the decision regarding licensing was the facility would require an authorisation.

5. UPDATES

Dounreay site update

Two reports were circulated in advance by DSRL –

- DSG(2009)P005 – December 2008 site performance
- DSG(2009)P006 – January 2009 site performance.

Tony Wratten, DSRL provided a verbal update. Of note:

- Replacement of new ventilation systems have been ongoing and SEPA is pleased that this is moving forward. As part of this project flags have been mounted to scare the birds to ensure they do not nest while work is ongoing.
- The decommissioning and demolition of the old criticality building has resulted in spoil being generated which has resulted in an increase in the number of lorries leaving site.

Ian Webster asked why the lorries were not covered as they left site. Tony Wratten said he would look into this.

ACTION: DSG/ESG(2009)M001/A004: TONY WRATTEN TO FIND OUT WHY LORRIES LEAVING SITE WITH RUBBLE AND SPOIL WERE NOT COVERED.

Graham Beaven noted that the lorries went through a gamma detector system before leaving site.

Rick Nickerson said that if the lorries were not covered then there would be a dust issue for the Buldoo residents.

- The DFR Nak disposal plant which is dealing with the liquid metal coolant from DFR is back in operation following some minor leaks which did not breach secondary containment. Some of the plant had undergone a redesign. SEPA and NII both assessed the work before approval to restart was given.
- Environmental improvements identified as a result of the site's reauthorisation are making good progress.
- The authorisation which was transferred from UKAEA to DSRL was not a fully modern authorisation designed for the decommissioning work being undertaken. Discussions with SEPA to try and refine the new authorisations are ongoing and currently the site is looking to lower the discharge limits. DSRL expect to be able to submit the authorisation to SEPA in June/July.

Roger Wilson noted that SEPA would consult on the authorisation as soon as possible after DSRL submit.

ACTION: DSG/ESG(2009)M001/A005: DSRL (DOUG GRAHAM) TO PROVIDE AN EXPLANATION ON THE NEW AUTHORISATION AT THE NEXT MEETING.

- With encouragement from the NDA, DSRL have been meeting with Chapelcross and Hunterston to allow best practice to be shared. Byron Tilly had attended the last meeting to set out SEPA's view.

Roger Wilson noted that NDA had also organised an environmental conference in November which had been attended by representatives across the NDA estate.

Rick Nickerson asked that SEPA avoid summer and xmas holidays when coming out to consult on the authorisation. Roger Wilson said he would take this on board.

Rick Nickerson also noted that at the last DSG meeting a reduction in the emergency planning zone had been announced. He asked why no consultation had taken place.

Tony Wratten stated that DSRL had historically had a 5km zone for emergency planning based on the hazard potential. As a result of the change of focus to decommissioning the hazard had been recalculated and there was no longer a need for a 5km zone and that it could be reduced to 1 km. The justification for the reduction had been sent to NII who would consider the information and link in with Highland Council.

Rick Nickerson pointed out that his question was more to do with the process for transparency.

Alastair MacDonald noted that the project team at DMTR had gone 11 years without a lost time accident and that the team should be congratulated on a very good record.

SEPA update

DSG(2009)P007 refers. Most issues relating to SEPA had been discussed earlier. No further issues were raised.

NDA update

Roy Blackburn provided a verbal update. Of note:

- NDA were currently looking at the process for the sale of NDA around nuclear sites. Land around some of the English/Welsh sites were currently being sold for potential new build. NDA would be outlining the potential for sale of land around the Dounreay site at the main DSG in the evening.
- Competition for the management of the Dounreay site was currently in preparation. Key date was to award a management contract in April 2011 but there was various stages in between.

Alastair MacDonald raised his concerns that most of the competition work was being done outwith the county and this was an issue for the DSG.

- NDA were pleased to see that the NaK Disposal plant was back in operation and was grateful for the efforts of the site, SEPA and NII in progressing this. The treatment of the liquid coolant was the second highest hazard over the entire NDA estate.

6. DSRL TOPICS

Particles update

DSG(2009)C022 provides an update of the particle clean-up project. Phil Cartwright provided a verbal update:

- For the off-shore retrieval work DSRL were considering identifying a prospective contractor to undertake the work.
- Investigations into the old diffusion chamber were progressing. A camera had been inserted 300 metres down the pipes. Video pictures and radiation results had not given any reasons for concern.
- SEPA/DSRL have now considered a replacement for the Dounreay Particles Advisory Group (DPAG) and a letter from SEPA's Chief Executive had been sent to Keith Boddy to invite him to convene a smaller version of DPAG.
- Monitoring of Melvich beach had been undertaken on 9th March for three days and no particles were detected. Monitoring of the strandline at Dunnet would be starting soon.
- No monitoring at Sandside had taken place since 15th October 2008. Discussions for access were ongoing.

Ian Webster asked about the sentry box. Phil Cartwright explained that at the beginning and end of the off-shore retrieval an area of the seabed would be monitored to ensure that there was no adverse impact from the off-shore work.

Rick Nickerson noted that he had been part of the original particles consultation steering group and was pleased to how the project was progressing.

- A significant particle had been detected and retrieved from the Dounreay foreshore.

Rick Nickerson asked whether this was a concern for the site. Phil Cartwright said that it was not surprising and that a second significant particle had just been detected and removed. Phil believed that these finds showed that the high activity particles remained just off the coast of Dounreay. One of the things that was being discussed with SEPA was the importance of monitoring at certain times of the year.

Rick Nickerson said that this re-inforces the importance of defining an end state for the clean-up. He also welcomed the creation of a replacement for DPAG which provided independent advice.

- The Food Standards Agency had recently reviewed the fishing exclusion zone and concluded that this would remain in force. This exclusion zone would likely remain in place until the data from the off-shore retrieval was available to make an informed decision.

Irina Foss asked if there was any danger to the eco-system in relation to the particle clean up offshore. Phil Cartwright said that the area within the fishing exclusion zone was probably the most fertile area along the north coast. He stressed that the technique for off-shore retrieval had been selected partly because of the minimum impact to the seabed.

Contaminated land update

Phil Cartwright tabled DSG(2009)C023. Of note:

- The strategy has been reviewed by DSRL, NDA, SEPA and NII.
- The overall aim is to ensure the site goes forward with a process that leads to the end state identified by DSG in 2006.
- Overall decommissioning of most of the buildings and most of the site should happen by about 2025. At that point there may be relicensing of the site if other uses are identified.
- Wastes will remain for storage. If a waste route is identified this is likely to happen around 2076.
- Since 2006 there had been changes in the legislation. The contaminated land regulations were currently being considered and SEPA were working on guidance. NII have clarified their position in terms of 'no danger' on the basis of a risk of less than 10^{-6} .

Roger Wilson clarified that NII would regulate inside the licensed site while SEPA had responsibility for regulating outside. Phil Cartwright acknowledged that if the site was delicensed it would then fall into SEPA's remit.

- Demolition of buildings will create holes and the intention is to use very low activity materials to fill these voids. This will only be done if the site can make the case under the regulations. This would avoid the unnecessary transport of rubble/spoil being taken off and on to the site. Work is still ongoing to bring this to a conclusion.
- It was not the site's intention to dig down into rock to remove every last bit of activity which would reside because of the permeability of the rock structure. Capping would be undertaken.
- The strategy does not include the Vulcan site or the licensed disposals (landfill 42).

Following a query from Alastair MacDonald, Phil Cartwright confirmed that a database of all investigations, spills (radioactive and other things such as oil, etc) has been compiled to ensure good records exist for the future. This information would be required if delicensing of the site was to be considered. The actions taken today would be important in 15 years time to ensure ground contaminated information was available for the future.

Rick Nickerson asked how the huge amounts of material used for void filling would be monitored. Phil Cartwright responded that decommissioning rubble would be subject to health physics surveys and if necessary cleaning up the contamination would be undertaken to a point where the rest of the material could be used. The rubble would have to be processed, crushed and monitored on a statistical basis depending on where the material came from and this will be carried out in agreement with SEPA and NII.

Rick Nickerson asked about the export of waste reported on page 9 of the strategy document. Phil Cartwright responded that export was probably the wrong word to

use and it simply meant moving rubble from one part of the site to the other. It was not the site's intention to export waste off the site to another location.

- The strategy would be reviewed on a regular basis.

Rick Nickerson said that transport should not be the sole attributer on this and that there was a balancing act which had to be considered under multi issues. Roy Blackburn confirmed that NDA were developing an overall waste strategy which would address all issues.

Ian Webster noted that over the past month or so there had been an increase in the level of noise which he believed was down to site preparation for the ILW stores and demolition activities. He also noted that there had been a steady stream of lorries taking away crush material and that this was not covered. The Buldoo residents were obviously concerned over issues including noise, vibration, dust, road surfaces etc. He said that the movement of lorries starts at 0800 and continues until about 1700 hours. He believed this was a clear intrusion of the lives of the Buldoo residents.

All waste options study

Graham Beaven provided an update. Of note:

- Following the workshop to score the options for waste streams the site asked for views from the public on the relative importance of the assessment criteria. The invitation was sent out to approx 1400 people and published on the website. Eight responses were received from members of the public and a letter from Shetland Island Council. DSG(2009)C026 refers to the output from the workshop and public responses.

Rick Nickerson stated that this amplified the need for a more pro-active consultation process. He believed that if this project had followed the site's process for consultation a better response would have been forthcoming. He added that he welcomed DSRL's offer to come to Shetland to discuss more fully.

Graham Beaven recognised that the process had been different to earlier consultations. The process was chosen because of the dates for submission to SEPA. A number of documents were required to be produced and these needed to be with SEPA by the 27th June. One of these documents was the BPEO and another was the strategy for its implementation.

Alastair MacDonald noted that the invitation to take part in the workshop to score the options had been offered to all members of the DSG and he had taken part in this process.

Rick Nickerson disagreed with the approach and felt that more should have been done to consult members of the public.

Ian Webster noted that in an ideal world more responses would have been received however at times public consultation in Caithness was a nugatory process.

It was further noted a requirement of the RSA Authorisation is to undertake a Site Waste BPEO on a four yearly cycle.

Graham Beaven stated that the site had:

- Reviewed the national and international techniques for waste minimisation.
- A draft of the paper had been finalised and gone through internal due process and comments were currently being addressed.
- The waste BPEO document would be finalised by the end of the month and would then go through an internal review in April.
- An early draft of the implementation strategy was being developed and would go through internal review shortly.

Rick Nickerson noted that the preferred option for LLW (Putrescible) sludge was to incinerate off-site. He asked whether it needed to be incinerated. Graham Beaven noted that at the moment Putrescible Sludge is being sampled/analysed. The BPEO process defined a number of strategies in case the analysis categorised this material into LLW, Exempt and/or Clean waste streams, rather than second guessing what category it falls into. There was therefore potential not to go down the incineration route and all options would be considered.

Graham Beaven agreed to provide updates to the ESG as appropriate.

ACTION: DSG/ESG(2009)M001/A006: GRAHAM BEAVEN TO CONTINUE TO UPDATE ESG ON PROGRESS WITH THE ALL WASTE OPTIONS STUDY.

7. ANY OTHER BUSINESS

• Vulcan update

Nigel Canty attended the ESG to provide an update on the licensed discharges to the environment from Vulcan NRTE. An outstanding action on Vulcan was to provide an update on the future of the Vulcan site and a list of questions had been sent to Vulcan to address (DSG(2009)C021 refers).

Nigel Canty explained that he was not in a position at present to respond to the questions relating to the future of the site but would endeavour to provide an update at the DSG meeting in June.

With reference to the discharges:

- Sewage treatment plant – water from the septic tank is discharged into the seawater intake geo. The water use licence sets limits on suspended solids and pH and states that the dry weather flow will not exceed 45 cubic metres per day.
- Cooling water – seawater taken in at the seawater pump house, used to cool the STF plant then discharged near the Dounreay fence. Licence is for a maximum discharge of 125,000 cubic metres per day at a temperature not exceeding 50 degrees C. This licence also covers the band screen backwash that flushes seaweed back out to the Atlantic.
- Acid Neutralisation plant: Waste from the plant creating demineralised water in STF. Liquid is monitored and chemically neutralised before being discharged into the seawater intake geo. Licence is for a maximum discharge of 30 cubic metres per day and specifies limits on pH.
- STF and DSRMP1 cooling towers: There are two licences for discharge of chlorinated water from the cooling towers, one for STF and one for DSMP1. The

towers have to be chlorinated to kill bacteria and the water is then de-chlorinated before discharge. The water use licence sets limits on pH and amount of total available chlorine. There is no limit set on quantity of water discharged.

General conditions:

- All the licences are issued by SEPA and set conditions that no significant visible discolouration of the receiving waters, significant increased foaming and visible oil or grease. They also stated that only the authorised substances can be released. The licences are designed so that as long as they are met there is minimal impact on the environment.
- Occasionally there have been tasks carried out that require discharges that are not covered by a water use licence. For example, the water jetting of the steam generators carried out in 2008. These types of tasks require negotiation with SEPA to agree suitable discharge arrangements.

Radiological transfers and discharges from Vulcan

- Liquid waste transfers: Vulcan does not discharge liquid effluent waste directly to the environment. Radioactive low level liquid waste is currently transferred to the DSRL low active drain prior to discharge to the environment through the low level liquid effluent treatment plant facility. Limits are agreed in accordance with site procedures.
- Gaseous waste discharges: There are three gaseous discharge outlets on the Vulcan site at the following locations:
 - The shore test facility (STF)
 - Dounreay submarine prototype (DSMP1)
 - The decontamination and waste treatment facility (DWTF).

All output from the stacks are monitored for beta particulate and alpha activity. In addition the STF stack outlet is also monitored for iodine. Transfers and discharges are reported to SEPA and DSRL on a monthly basis.

With regard to the future of Vulcan operations alternative options were being considered for the potential loss of services from the Dounreay site (dependent on decommissioning activities programmed on both the Dounreay and Vulcan site). These options would be considered in full once the future of the Vulcan site is identified.

Nigel Canty also noted that the Vulcan site would be seeking to reduce its emergency planning zone in the near future. He would ensure that DSG is kept aware of progress.

ACTION: DSG/ESG(2009)M001/A007: NIGEL CANTY TO RESPOND TO QUESTIONS LISTED IN DSG(2009)C021 AT THE DSG MEETING TO BE HELD IN JUNE 2009.

- **DSRL Heritage strategy update**

DSG(2009)C018 was tabled for members for updating on the progress of the heritage strategy.

There being no further business the meeting closed.

Alastair MacDonald
DSG Chairman

22nd March 2009

APPENDIX 1 – ACTION STATUS

ACTIONS ARISING FROM THIS MEETING

DSG/ESG(2009)M001/A001: Secretary to amend minutes (DSG/ESG(2008)M013) to reflect amendments as noted in minutes.

DSG/ESG(2009)M001/A002: Tony Wratten to provide details of the waste streams which have the potential to be sent to Sweden for smelting.

DSG/ESG(2009)M001/A003: 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.

DSG/ESG(2009)M001/A004: Tony Wratten to find out why lorries leaving site with rubble and spoil were not covered.

DSG/ESG(2009)M001/A005: DSRL (Doug Graham) to provide an explanation on the new authorisation at the next meeting.

DSG/ESG(2009)M001/A006: Graham Beaven to continue to update ESG on progress with the all waste options study

DSG/ESG(2009)M001/A007: Nigel Canty to respond to questions listed in DSG(2009)C021 at the DSG meeting to be held in June 2009.

ACTIONS ONGOING SINCE LAST MEETING

M015/A021: Secretary to put heritage strategy presentation on September DSG agenda. *Note this will come forward at a future meeting once project team is ready – likely to be summer 2009.*

M016/A014: Doug Graham to consider how best to present the information on environmental aspects and the frequency of this report. *Action ongoing – work was presently ongoing to provide useful and clear information on environment aspects and will include text on the environmental monitoring reporting.*

ACTIONS COMPLETED SINCE LAST MEETING (MARCH 2009)

M015/A009: Nigel Canty to provide a brief to the environment sub group meeting on the future of the Vulcan site in about six months time. *Action completed – see DSG(2009)C021 for list of questions to be addressed. This action is superseded by new action.*

M015/A017: ESG to ask NII whether the proposed low level waste facility will be a licensed site. *Action complete – discussions are ongoing with Scottish Government and HSE. Action superseded by new action.*

M017/A017: ESG members to consider whether the environmental monitoring report would be useful to receive on a regular basis. (DSG(2008)C237). *Action complete – comments from members have intimated that the information is too raw and detailed and would be more useful in a text summary.*

M017/A019: ESG members to consider RIFE report and raise any issues/questions with Roger Wilson, SEPA. *Action complete – no comments/issues were raised.*

M017/A023: Graham Beaven to provide the weighting information for the all waste options study. *Action complete – see DSG(2009)C026*