



Gulf Veterans' Illnesses Unit
MINISTRY OF DEFENCE
 Room 6/03, St Christopher House, Southwark Street,
 London, SE1 0TD

Telephone	Direct dial	020 7305 4644
	Helpline	0800 169 4495
	Fax	020 7305 2374

Our Reference:

D/GVIU/7/1/8/2

Date:

18th June 2002

MINUTES OF THE FOURTH DEPLETED URANIUM SCREENING PROGRAMME OVERSIGHT BOARD MEETING ON 18th April 2002

Present:			
Board:	Professor David Coggon Surg. Cdre Nick Baldock Dr Chris Busby Dr Peter van Calsteren Mr Ivor Connolly Mr Ray Bristow Miss Frances Fry Professor Malcolm Hooper Professor Ian Gilmore Dr Muir Gray Miss Beverley Green Dr David Lewis Professor Brian Spratt Mr Shaun Emery	MRC INM LLRC OU NGV&FA NGV&FA NRPB GVA RBL NSC RBL INM RS GVIU	Chair
Observers:	Air Cdre Simon Dougherty Mr Alan Duncan Mrs Brigid Rodgers Mrs Janie Walker Dr Hilary Walker	SGD HJA GVIU GVIU DH	Secretary
Apologies:	Mr Ron Brown Professor Nick Day Dr Len Levy Dr Gordon Paterson Dr Margaret Spittle	DRPS IPH MRC IEH BRC MH	

Item	Discussion and Decisions	Actions (Action date)
1.	<p><u>Introduction</u></p> <p>a) New attenders were welcomed and introduced.</p> <p>b) The Chairman informed members that a radiation medicine expert had been appointed to the Board, Dr Margaret Spittle, Consultant Clinical Oncologist at the Middlesex Hospital. [Dr Spittle was unable to attend the meeting]</p> <p>c) The Chairman stated that the main aims of this meeting were to:</p> <ul style="list-style-type: none"> • Examine the six bids received for the pilot exercise contracts and reach a decision on which laboratories should be given a contract • Discuss longer-term issues concerning the main testing programme 	
2.	<p><u>Minutes of last meeting</u></p> <p>a) These were accepted as a true record of the meeting.</p>	
3.	<p><u>Matters arising from last meeting</u></p> <p>a) A full list of actions arising from previous meetings and their current status is attached at Annex A.</p> <p>b) The Secretary gave an update on progress with the DUOB website. The website is now up and running and available at www.duob.org.uk (not www.duob.org as listed in the minutes from the last meeting). The website contains a list of members and their CVs and the minutes of all meetings. The layout and presentation of the site is not ideal and the Secretary undertook to improve the website by the next meeting. Suggestions from Board members could be given outside the meeting.</p> <p><u>Action 4.1. Secretary to improve content and presentation of DUOB website</u></p> <p><u>Action 4.2. OB Members to provide comments on DUOB website to Secretary</u></p> <p>c) The Secretary confirmed that the Neil Stradling (NRPB) presentation on excretion profiles discussed at the last meeting had been distributed to the Board</p> <p>d) The Secretary confirmed that he had contacted Dr Durakovic to seek permission to distribute the slides presented to the Royal Society in November 2001. Dr Durakovic had stated that he was currently submitting his results for publication and would be happy for the slides to be distributed once this had been achieved.</p> <p>e) It was noted that some members of the Board had not received a copy of the Royal Society report part II. The Secretary undertook to contact the Royal Society to establish why this was the case and to ensure that the necessary copies were distributed.</p> <p><u>Action 4.3. Secretary to contact RS re. distribution of RS paper</u></p>	<p>Secretary (18/6/02) All (7/6/02)</p> <p>Secretary (17/5/02)</p>

f) Brian Spratt gave a brief summary of the conclusions of the Royal Society report. The main conclusion was that, for the majority of soldiers on the battlefield it is unlikely there will have been any adverse effects on the kidneys from DU exposure. In extreme circumstances there could be an above normal risk of kidney damage if large amounts of uranium were inhaled or ingested. However, the Royal Society (and the MOD) were unaware of any British soldiers to whom this would apply. Brian Spratt stressed that the work of the OB in establishing a retrospective test was important as there was uncertainty about the exposures that people had received. It was considered that there was little information on the long-term effects of uranium on the kidney. Chris Busby noted his concerns about this, citing the example of a Granada TV cameraman who had experienced major kidney problems since filming in Iraq. He was also worried by cancer statistics for Italian peacekeepers in the Balkans and for Iraqi civilians. Ray Bristow stated that the Royal Society had declined to consider information on possible health effects from Iraq in the preparation for their report. Brian Spratt countered that the RS was aware that people in Iraq have associated ill-health with exposure to DU but had not so far seen any properly validated data to support these claims. [The issue of cancer in Italian peacekeepers is discussed in Section 8 of these minutes]

g) Ivor Connolly asked if OB members were aware of the MOD response to the RS report and the MOD proposals for research into DU that had recently been released. Brigid Rodgers stated that the MOD research proposals had just been released to veterans' organisations for their comments. The Chairman asked for this document to be circulated to the Board

Action 4.4 Secretary to circulate the MOD research proposals

h) There was some discussion about whether the protocol detailing the preparation of the spiked samples for the pilot exercise should be released to all Board members. David Lewis pointed out that the protocol contains the exact figures for the concentrations and isotope ratios in the samples and that the more people with access to this information the greater the risk of it becoming available outside the DUOB, thus prejudicing the results of the pilot exercise. It was generally agreed that the protocol should be circulated to board members with the spiking information removed (with the exception of David Coggon, David Lewis, Peter van Calsteren and Malcolm Hooper who had contributed to the creation of the protocol). Chris Busby stated that he would like to be included on the list of those receiving the whole protocol – this was agreed.

Action 4.5. Secretary to edit and distribute protocol document

i) Ray Bristow expressed concern that the chosen test for the main testing programme would not be of sufficient sensitivity to detect DU 11 years after the exposure. Malcolm Hooper stated that he had discussed the subject with a number of contacts and the consensus view was that a suitable test should be possible. [Malcolm Hooper had been involved in the design of the spiking regime and had attended a meeting with the NEQAS lab along with David Lewis and Peter van Calsteren. At that meeting, Malcolm Hooper had fully endorsed the concentrations and isotope ratios that were chosen as reflecting the needs of the Gulf Veterans].

j) David Lewis stated that he had so far been unable to produce the promised paper on evaluating laboratories but would update his previous draft on this subject prior to the next meeting. [This is covered by action 3.7.]

Secretary
(16/4/02)

Secretary
(17/5/02)

<p>4.</p>	<p><u>Programme Plan</u></p> <p><u>Update on Pilot Study Bids</u></p> <p>a) The Chairman stressed that the bids for the pilot exercise contracts were strictly Commercial-in-Confidence and must not be communicated to persons external to the Oversight Board.</p> <p>b) The Chairman stated that 7 Invitations to Tender (ITT) had been issued and six responses had been received.</p> <p>c) Peter van Calsteren led a discussion on merits of the six bids. Four of the bids appeared to be reasonably priced and two were very expensive. Agreement was reached that the four reasonably priced bids should be given pilot study contracts. Of the two remaining bids one proposed a method that was considered novel but not 'state of the art' for uranium isotope detection. Agreement was reached that this method would not be suitable for the pilot exercise but should be noted in case the results from the pilot study indicated that more conventional analytical techniques were unsatisfactory. Peter van Calsteren noted, however, that the breakdown of this bid also involved ICPMS testing and it was agreed that the Secretary should approach the laboratory to see if they would be willing to quote for just the ICPMS work.</p> <p>d) The sixth bid was considered extremely expensive and David Lewis expressed concern that they had quoted against their Expression of Interest proposal rather than the Statement of Requirement issued with the ITT. The methods they proposed, namely ICPMS and TIMS, were covered by the other laboratories, however it was considered they had good experience in working with urine samples. The Secretary noted that among the other chosen bids the ICPMS method was well represented but TIMS was only being used by one laboratory. He suggested that he approach the sixth bidder with a view to asking for a quote based on the TIMS work only and to establish that they were quoting against the Statement of Requirement. This was agreed.</p> <p><u>Action 4.6. Secretary to arrange for the two bidders to requote for pilot exercise</u></p> <p><u>Action 4.7. Secretary to arrange for pilot study contracts to be placed</u></p> <p>e) The Secretary pointed out that a number of the bidders had indicated that they would require a period of two months to carry out the analyses. It was agreed that this was acceptable. The pilot studies should therefore finish in early July.</p> <p>f) Nick Baldock asked what would happen if the laboratories did not provide results within the given timescales. The Secretary stated that the necessary clauses would be included in the contracts to protect against this.</p> <p><u>Update on laboratory to supply spiked samples</u></p> <p>g) The Secretary stated that he had talked with the NEQAS lab on the day before the meeting. They had encountered some difficulties with the transportation of the reference materials from Belgium but were expecting delivery on 19th April 2002. Everything else was in place to produce the samples. Peter van Calsteren was tasked with visiting NEQAS on behalf of the DUOB to ensure that the work was being carried out to the required standards.</p> <p><u>Action 4.8. Peter van Calsteren to visit NEQAS in the week beginning 22nd April 02</u></p>	<p>Secretary (ASAP) Secretary (26/4/02)</p> <p>Van Calsteren (26/4/02)</p>
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	<p>Post meeting note: NEQAS have been notified that the start date for the pilot exercise will be 7th May 02.</p>	
<p>5.</p>	<p><u>Requirements for Main Testing Contract</u></p> <p><u>Advertising</u></p> <p>a) There was some discussion about the advertising of the main testing contract. The Secretary confirmed that it was necessary to advertise this contract as only the pilot exercise had been advertised so far. Some laboratories may be interested in bidding for the main contract who were not interested in the smaller pilot study contract. The Chairman pointed out that any laboratory bidding for the main contract would have to demonstrate the validity of their method.</p> <p>b) The Secretary stated that the main testing contract would be advertised in the MOD Contracts Bulletin and the Official Journal of the European Community. As with the pilot exercise, this advertisement would have to run for a minimum of 40 days. To keep the programme on schedule, the advert would have to run in parallel with the pilot exercise so that ITTs could be issued to the appropriate laboratories following the assessment of the pilot exercise results. The Secretary sought agreement from the Board to advertise the main testing contract in June 02, pointing out that the advert need not specify any particular requirements that might hinge on the results of the pilot exercise. This was agreed.</p> <p><u>Action 4.9. Secretary to draft advert for main testing contract for approval for the DUOB</u></p> <p><u>Numbers</u></p> <p>c) Peter van Calsteren suggested that a number of laboratories could be chosen for the main testing programme. This would enable the testing to proceed in parallel, allow comparison between the laboratories, and provide back-up should one laboratory encounter difficulties in delivery. Chris Busby suggested that samples should be split and sent to two laboratories to provide re-assurance that the results were accurate. It was agreed that this could be useful, at least for a subset of samples. A final decision would depend on the extra costs that would be entailed.</p> <p>d) The Chairman pointed out that it would be preferable to form an idea of the number of tests that would be required to enable a value-for-money contract to be negotiated. A number of sources of information were discussed including the MOD Gulf Veterans Medical Assessment Programme (GVMAP), the membership of the National Gulf Veterans & Families Association (NGVFA) and the Gulf Veterans Association (GVA) and scientists who were responsible for research in veterans. It was agreed that in the order of 1000 tests might be needed in the first 6-12 months, although the demand for voluntary testing would depend in part on the exposure levels found when the programme started.</p> <p>e) Malcolm Hooper suggested that it would be important to identify groups most likely to have had high exposure. Beverley Green asked if those considered most likely to have been exposed would be notified. Brian Spratt reiterated that this had been recommended in the first Royal Society DU paper. It was agreed that this would be discussed further as plans for the testing programme evolved.</p>	<p>Secretary (18/6/02)</p>

Background Levels

f) There was a discussion about how background levels of uranium isotope excretion would be determined to aid interpretation of the voluntary tests. Nick Baldock pointed out that Armed Forces personnel are not typical and that the background levels of a general population may not be applicable. David Lewis noted that there are certain areas in the UK from which Armed Forces recruitment is much higher than others. Nick Baldock suggested that recruitment training depots, where new recruits spend 8-10 weeks, could provide samples representative of those entering the Armed Forces. Ian Gilmore pointed out that there would be little spread of age in this group. The Chairman clarified that the choice of subjects would depend on the purpose of the exercise. The main requirement at this stage was to establish how much variation in uranium isotope excretion occurs in people with no known exposure to DU, and if variation is found, what factors determine it. These factors could then be taken into account in the interpretation of results for individual veterans. For these purposes, a non-military population would be satisfactory, and the exact source of subjects would not be too critical.

Sample Collection

g) The Chairman mentioned that, at the last meeting, MOD had agreed to fund regional centres for the collection of urine and the provision of advice on the results at a reasonable cost. Consideration now had to be given to how this could be achieved. Muir Gray said there were a number of schemes in operation that could be valuable reference points including the HSE screening programme for bladder cancer and the Chlamydia screening pilot in Portsmouth. David Lewis suggested that a mobile collection centre with an attached medic may be an alternative. Beverley Green asked what the arrangements would be for overseas veterans. Muir Gray was tasked with considering these options and producing a paper.

Action 4.10. Muir Gray to produce a paper on sample collection/ provision of advice

h) The Chairman said that the following items needed to be considered:

- The advice given to veterans in advance of the testing
- The advice to be given when an individual's results were available
- The information to be provided to GPs
- The mechanism for feeding back the results e.g. letter, email, meeting.

The Chairman took an action to prepare suggestions for the information to be sent to GPs. Ian Gilmore/Beverley Green undertook to prepare suggestions for the advance advice to veterans and the advice to be given when the results are known.

Action 4.11. Chairman to produce a draft of information to be given to GPs

Action 4.12. RBL representatives to produce a draft of advance advice to veterans and advice once results are known

There was a brief discussion on how the results should be fed back to the veterans. Ray Bristow stated that the Canadian results had been sent by email and the veterans involved were happy with that approach. Muir Gray undertook to consider this subject in his paper (Action 4.10).

Muir Gray
(11/6/02)

Chairman
(17/5/02)

Green/
Gilmore
(17/5/02)

	<p>been carried out pre-1998. GVIU undertook to check this.</p> <p><u>Action 4.17. GVIU to report on MOD research into health effects of DU</u></p>	<p>GVIU (17/5/02)</p>
7.	<p><u>Timescales</u></p> <p>a) The Secretary stated that the pilot study should now be scheduled to last two months which meant it would end in early July. Allowing for assessment time this would mean that ITTs for the main contract could be issued at the end of July. The programme was still on target to provide the voluntary testing by the end of the year. The Secretary undertook to distribute a new time schedule</p> <p><u>Action 4.18. Secretary to distribute new schedule</u></p>	<p>Secretary (17/5/02)</p>
8.	<p><u>DU Background and Scientific Issues</u></p> <p><u>Screening for myeloma, kidney cancer and other disorders</u></p> <p>a) Muir Gray discussed some of the theoretical background to screening. He stated there were four main issues that should be considered:</p> <ul style="list-style-type: none"> • Do we understand the disease? • Is there a good test for the disorder? • Do we have an effective treatment? • Can we organise and deliver it? <p>Muir Gray noted that screening is today presented as risk reduction rather than prevention. It must be considered whether the screening would do more harm than good, e.g. by causing unnecessary worry, and whether the detection of a problem is actually a good thing.</p> <p>b) The main diseases that have been suggested as potentially associated with exposure to DU were identified as :</p> <ul style="list-style-type: none"> • Myeloma • Kidney cancer • Motor neurone disease • Leukaemia • Lymphoma <p>Muir Gray undertook to produce a preliminary report on the potential for screening for these diseases.</p> <p><u>Action 4.19. Muir Gray to produce report on the potential for screening for myeloma, kidney cancer etc</u></p> <p>c) Ray Bristow stated that the veterans had moved on from urine tests to chromosome aberrations. David Coggon stated that this had been discussed at previous meetings and the decision had been made to focus on the primary indicators of DU exposure i.e. urine tests. It would be more appropriate to look at chromosome aberrations and their association with DU exposure as a research project.</p> <p><u>Italian Veterans</u></p> <p>d) At the last meeting there had been some discussion about a report from an investigative commission set up by the Italian Ministry of Defence (Preliminary Report, Investigative Commission Established by the Italian Ministry of Defence on the Incidence of Malignant Neoplasia Among Military Personnel Involved in Operation in Bosnia and in Kosovo,</p>	<p>Muir Gray (18/6/02)</p>

	<p>www.nato.int/du/docu/d010417c.pdf). The report describes a cohort study of Italian military personnel from the date of their first mission to Bosnia or Kosovo until 31 January 2001. Chris Busby stated that he believed there was a serious issue regarding exposure to DU and cancer, and that the Italian report provided the most credible evidence for this. He believed that the data in the report demonstrated that there was a sharp increase in lymphomas in Italian veterans on their return from the Balkans. He considered it highly plausible that DU could have caused these lymphomas through a genotoxic mechanism.</p> <p>e) The Chairman expressed doubts that a genotoxic mechanism could produce overt cancer after such a short interval, and also questioned Chris Busby's suggestion that risk could then be expected to decline after only 30 months. He reiterated his view that although the findings of the Italian analysis to date are not a cause of concern, because of inevitable limitations, neither do they provide much reassurance.</p> <p>f) Malcolm Hooper stated that he understood three cases of renal cancer had been detected at the MOD GVMAP. He believed these cases had been identified incidentally when using abdominal ultrasound for other purposes and suggested that ultrasound of the kidneys could be used as a screening test. The merits of this would be covered in Muir Gray's paper. GVIU undertook to check if abdominal ultrasound was now a standard test at the GVMAP.</p> <p><u>Action 4.20. GVIU to check if abdominal ultrasound is a standard procedure at the MAP</u></p> <p>Post meeting note: Abdominal ultrasound screening is, and always has been, a standard test at the GVMAP. Two cases of renal cancer have been identified by ultrasound at the GVMAP.</p> <p>g) Malcolm Hooper asked about the status of the GVIU work analysing cancer statistics amongst Gulf veterans in comparison with the general population.</p> <p>Post meeting note: Results of the analysis are likely to be released before the end of the year.</p>	<p>GVIU (17/5/02)</p>
<p>9.</p>	<p><u>Date of next meeting</u></p> <p>a) The date of the next meeting was set for 17th June 2002 at 09:45. It will be held at the Royal British Legion HQ on Pall Mall. The following meeting has been pencilled in for 24th July by which time the results of the pilot exercise should have been assessed.</p>	
<p>10.</p>	<p><u>A.O.B.</u></p> <p>a) The Chairman asked the Board members if they wished to see more correspondence on DU issues from members of the public such as that forwarded by the Royal British Legion (distributed with the calling notice for this meeting). It was agreed that such letters would be circulated to the Board if they were <u>directly relevant</u> to the screening programme or provided some new information on the subject.</p> <p>b) Chris Busby asked if the Secretary could make the board members aware of the location of the UNEP Serbia/Montenegro report on the internet.</p> <p><u>Action 4.21. Secretary to circulate web address of the UNEP report</u></p>	<p>Secretary (17/5/02)</p>

	<p>Post meeting note: The UNEP Serbia/Montenegro report is available online at http://postconflict.unep.ch/publications/dureportsermont.html</p> <p>c) Peter van Calsteren asked if there had been any follow-up on the MOD invitation to Dr Durakovic to come over and discuss his work.</p> <p>Post meeting note: Dr Durakovic has responded to the MOD invitation saying he would be happy to talk about his work once the results have been published.</p> <p>d) Malcolm Hooper asked if GVIU was aware of a Dai Williams paper about the use of DU in Afghanistan. The Secretary confirmed that GVIU was aware of the document. Brian Spratt stated that the Royal Society had received a letter from the MOD Chief Scientific Advisor stating that no DU munitions had been used to date by UK forces in Afghanistan and it was understood that the US had also not used DU munitions. However, it is known that A-10 aircraft have been in action in Afghanistan and such aircraft have the capability to use DU munitions.</p> <p>e) Ray Bristow stated that the NGVFA had recently had a number of veterans tested in the UK for uranium isotopes in urine but he was unable to reveal any details of these tests. He suggested that details may be revealed if the MOD would make available a number of soldiers in Germany to provide blood tests to act as a control group for chromosome aberration tests. The Secretary pointed out that if urine tests were being done then the methods and results would be of great interest to the DUOB. It was agreed that if Ray Bristow wished to pursue the availability of control subjects, he should write to the Surgeon General's Department.</p>	
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Distribution:

All members

All observers

Devolved Health Administrations

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ANNEX A - DUOB Action List

<u>Action</u>	<u>Date placed</u>	<u>Action Date</u>	<u>Detail</u>	<u>Owner</u>	<u>Comments</u>
1.1	27/9/01	16/11/01	'Definitions of Terms' appendix to be drafted and circulated for comment	Lewis/ Calsteren	COMPLETE – Definitions attached to draft protocol distributed at 2 nd meeting
1.2	27/9/01	16/11/01	Nominations for toxicologist and radiation medicine experts to be sent to GVIU	All OB Members	COMPLETE – See actions 2.2, 2.3
1.3	27/9/01	26/10/01	CVs and declarations of interest to be sent to GVIU	All OB Members	Still awaiting Hooper (short), Levy
1.4	27/9/01	12/10/01	Secretary to establish if payments can be made for Board members to attend meeting	Secretary	COMPLETE – Payments will be considered on an individual basis. Written justification must be forwarded by Board member to GVIU for consideration.
1.5	27/9/01	12/10/01	Secretary to create a claim form for expenses	Secretary	COMPLETE - Form distributed on 23/10/01
1.6	27/9/01	26/10/01	Secretary to distribute a copy of the press release to board members	Secretary	COMPLETE – Press release distributed on 23/10/01
1.7	27/9/01	Ongoing	Board members to write to GVIU with suggestions for further background reading	All OB Members	Ongoing
1.8	27/9/01	26/10/01	GVIU to obtain permission and distribute responses to the 2 nd consultation paper to Board Members	Secretary	COMPLETE – distributed by email on 13/11/01
1.9	27/9/01	26/10/01	GVIU to distribute list of email addresses	Secretary	COMPLETE – Distributed on 23/10/01
1.10	27/9/01	26/10/01	Board members to suggest suitable laboratories to GVIU	ALL OB Members	COMPLETE – 30/11/01
1.11	27/9/01	26/10/01	Secretary to arrange for invitation to express an interest in the 'pilot study' to be advertised in the relevant journals	Secretary	COMPLETE - Advert in MOD Contracts Bulletin on 21/11 and OJEC on 13/11/01
1.12	27/9/01	16/11/01	Produce and circulate draft protocol prior to next meeting	Lewis/ Calsteren	COMPLETE – 30/11/01
2.1	30/11/01	4/1/02	GVIU to send TOR to Minister for comment	Secretary	COMPLETE - Sent on 11/1/02. Minister has approved the TOR.
2.2	30/11/01	8/1/02	CVs for toxicologist to be sent to GVIU. GVIU to forward to Minister	Secretary	COMPLETE – Sent on 15/1/02
2.3	30/11/01	8/1/02	Suggestions for radiation medicine experts to be sent to GVIU	All	COMPLETE
2.4	30/11/01	8/1/02	GVIU to consult Royal College of Radiologists	Secretary	COMPLETE – RCR recommendation received on 24/1/02
2.5	30/11/01	12/12/01	GVIU to notify members of expressions of interest	Secretary	COMPLETE – emailed on 13/12/01
2.6	30/11/01	7/12/01	Draw up Statement Of Requirement for the sample preparation	Van Calsteren	COMPLETE – 1 st draft discussed at meeting with NEQAS on 18/12/01. Will be revised in discussion between LEWIS, van Calsteren and NEQAS
2.7	30/11/01	10/12/01	David Lewis to contact the preferred supplier of spiked samples (and other suppliers if required) to assess interest and costs	Lewis	COMPLETE
2.8	30/11/01	13/12/01	Arrange meeting with supplier of spiked samples	Lewis	COMPLETE – see 2.9 below

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2.9	30/11/01	20/12/01	Subgroup to visit supplier	Coggon/ Lewis/ van C/ GVIU	COMPLETE – lab visited on 18/12/01
2.10	30/11/01	28/1/02	Nick Day to review protocol and proposed statistical methods	Day	Ongoing
2.11	30/11/01	21/12/01	David Lewis to redraft protocol for pilot study of analytical methods	Lewis	COMPLETE
2.12	30/11/01	21/12/01	David Lewis to draft the SOR for the urine testing in the pilot study, to be distributed to the OB by 21/12/01	Lewis	COMPLETE – ITT sent to NEQAS on 14/1/02
2.13	30/11/01	10/1/02	OB to comment on the SOR for urine testing by 12.00, 10 Jan 02	All	COMPLETE
2.14	30/11/01	28/1/02	Chairman to appraise MRC of the planned timetable for the development of the testing method	Chair	COMPLETE – Chairman talked to Catherine Moody of MRC
2.15	30/11/01	21/1/02	Chairman to produce paper for next meeting summarising the different types of epidemiological study that might be relevant	Chair	COMPLETE – Paper circulated on 11/1/02
2.16	30/11/01	21/1/02	GVIU to produce a paper on the options for a chain of custody of urine samples	Secretary	COMPLETE – Paper circulated on 25/1/02
2.17	30/11/01	28/1/02	GVIU to identify the position of MOD funding of regional centres	Secretary	COMPLETE – MOD will fund regional centres but the details of this need to be decided
2.18	30/11/01	28/1/02	NRPB to obtain advice on the feasibility of testing for DU in tissue samples obtained at autopsy	NRPB	COMPLETE – paper distributed on
2.19	30/11/01	14/1/01	GVIU to circulate Annexes A and D (on the current ICRP models and Organ Doses from intakes) from the Royal Society report	Secretary	COMPLETE – Circulated on 11/1/02
2.20	30/11/01	21/1/02	GVIU to provide Contracts Branch with the draft protocol in time for ITT issue on 31 Jan 02	Secretary	COMPLETE – ITT issued 26 th Feb 2002. Response date = 9 th April.
2.21	30/11/01	21/1/02	David Lewis/ van Calsteren to prepare a paper on laboratory methods	Lewis/ van Calsteren	Ongoing
2.22	30/11/01	7/12/01	GVIU to arrange a meeting between Chairman and US of S	Secretary	COMPLETE – Chairman met with US of S on 16/1/02
3.1	28/1/02	15/2/02	GVIU to distribute NRPB presentation	Security	COMPLETE – Sent out on 19/2/02
3.2	28/1/02	15/2/02	GVIU to seek permission and distribute Durakovic presentation to RS	Secretary	Ongoing – Durakovic is seeking publication of his findings. Will allow us to distribute slides when this happens
3.3	28/1/02	15/2/02	Brian Spratt to investigate if advance copies of urine excretion section of RS report can be made available to members of the Board	Spratt	COMPLETE – RS report published 12/3/02
3.4	28/1/02	N/A	GVIU to distribute part 2 of the RS report when available	Secretary	COMPLETE – Distributed by the RS
3.5	28/1/02	15/2/02	GVIU to contact proposed specialist in radiation medicine	Secretary	COMPLETE – Dr Spittle appointed to the OB
3.6	28/1/02	15/3/02	GVIU to produce a paper on requirements for main testing programme contract	Secretary	COMPLETE – Discussed at 4 th DUOB meeting

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3.7	28/1/02	15/3/02	David Lewis to produce a paper on how laboratories can be judged against each other	Lewis	Ongoing
3.8	28/1/02	15/2/02	GVIU to circulate the McDiarmid paper	Secretary	COMPLETE – Distributed on 19/2/02