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Our Reference:

D/GVIU/7/1/8/2

Date:

6th February 2003

These minutes are published in draft form and are subject to confirmation at the next Board.

MINUTES OF THE EIGHTH DEPLETED URANIUM SCREENING PROGRAMME OVERSIGHT BOARD MEETING ON 9th JANUARY 2003

Present:			
Board:	Professor David Coggon Surg. Cdre Nick Baldock Mr Ron Brown Dr Peter van Calsteren Mr George Etherington <i>representing Miss Frances Fry</i> Miss Beverley Green Dr Len Levy Professor Malcolm Hooper Dr David Lewis Dr Gordon Paterson Professor Brian Spratt GVIU Representative	MRC INM DRPS OU NRPB RBL MRC IEH GVA INM BRC RS GVIU	Chair Secretary
Observers:	Air Cdre Simon Dougherty Mrs Brigid Rodgers Miss Rosie Wane Wg Cdr Charlie Wilcock	SGD GVIU GVIU SGD	
Apologies:	Dr Chris Busby Mr Ivor Connolly Mr Alan Duncan Miss Frances Fry Professor Ian Gilmore Mr Jim Glennon Dr Muir Gray Mr Neville Higham Dr Margaret Spittle Dr Hilary Walker	LLRC NGV&FA HJA NRPB RBL NGV&FA NSC HSE MH DH	

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Item	Discussion and Decisions	Actions (Action date)
1.	<p><u>Introduction</u></p> <p>a) The Chairman welcomed board members to the meeting.</p> <p>b) The Chairman said that he had spoken to Nick Day who had not been able to attend a meeting of the DUOB since its inception. Nick Day had offered his resignation from the board which the Chairman had accepted. It was considered unnecessary to replace him at this time.</p>	
2.	<p><u>Minutes of Last Meeting</u></p> <p>a) Minor changes to the minutes of the last meeting were agreed by all board members.</p> <p><u>Action 8.1. Secretary to amend minutes of 7th DUOB and circulate</u></p> <p>b) Malcolm Hooper stated that he had sent a version of the questionnaire that had previously been discussed at the DUOB to the National Gulf Veterans and Families Association (NGVFA) and Gulf Veterans Association (GVA). Unfortunately, this had been distributed by those organisations with a header that erroneously indicated that the questionnaire was from the DUOB. Malcolm Hooper apologised for this error and stated that he had contacted the veterans' organisations to point out the error. The NGVFA website contains an apology to this effect.</p> <p><u>Action 8.2. Secretary to distribute Malcolm Hooper apology email to DUOB members</u></p> <p>c) Malcolm Hooper questioned the post meeting note in Section 10d of the last minutes stating that the Veterans' Agency (VA) do not have a database of the illnesses suffered by Gulf veterans. Brigid Rodgers confirmed that, while the VA has details regarding pension claims, it does not collect data on the illnesses of Gulf veterans. Malcolm Hooper expressed concern that such a database did not appear to exist. Brigid Rodgers pointed out that cases of cancer in Gulf veterans are identified through cancer registries, but that the incidence of other illnesses was not routinely reported. It was agreed that further information was required on this subject and Gordon Paterson undertook to email the Secretary regarding this.</p> <p><u>Action 8.3. Gordon Paterson to provide information on the existence of disease registers</u></p>	<p>Secretary (17/1/03)</p> <p>Secretary (17/1/03)</p> <p>Paterson (31/1/03)</p>
3.	<p><u>Matters arising from last meeting</u></p> <p><u>Chromosome Aberration Papers</u></p> <p>a) David Lewis stated that he had emailed the papers regarding chromosome aberrations to the Secretary although these had not been received. He undertook to resend them. (Actions 7.3 and 7.4 ongoing)</p> <p><u>Questionnaire to subjects</u></p> <p>b) Malcolm Hooper stated that he had not received any comments on the questionnaire except from the Chairman. Although the questionnaire is not</p>	

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	<p>required urgently, comments on this would still be useful at this time. (Action 7.5. ongoing)</p> <p><u>Summary of pilot exercise</u></p> <p>c) The Secretary stated that he had not yet completed this action. (Action 7.6. ongoing)</p> <p><u>Mortality Figures</u></p> <p>d) The Secretary confirmed that he had circulated the answer to the Parliamentary Question providing the mortality figures for Gulf veterans.</p>	
4.	<p><u>Update on Extended Pilot Exercise</u></p> <p>a) The Chairman reported that a meeting had been held on 12th November 2002 with the three laboratories chosen to take part in the extended pilot exercise. This meeting was attended by the Chairman, Peter van Calsteren, Ron Brown and Jim Glennon from the DUOB. A long discussion had been held regarding the Statement of Requirement (SOR) for the extended pilot exercise. The output of the meeting was a revised SOR which had subsequently been finalised through email discussions.</p> <p><u>Action 8.4. Secretary to circulate final SOR for extended pilot exercise to DUOB members.</u></p> <p>b) The Secretary confirmed that Invitations To Tender (ITTs) had been issued to the three laboratories and that the return date was 9th January 2003.</p> <p>c) There was some discussion over the target ratios that had been set for the spiked samples. These had been agreed at the last DUOB meeting but not included in the minutes. The Secretary agreed to distribute the target ratio information to the technical members of the DUOB.</p> <p><u>Action 8.5. Secretary to distribute target ratio figures to a subset of the DUOB</u></p> <p>d) The Chairman summarised what had been agreed with regard to the extended pilot exercise:</p> <ul style="list-style-type: none"> • Three laboratories had been selected to take part in the extended study following the initial stage. • Each laboratory was to produce a batch of urine samples (one unspiked urine and two spiked to different isotope ratios). These would be tested by the producing laboratory and then distributed to the other two laboratories. The distribution would be via a third party who would re-label the samples. Each laboratory would, therefore, receive 9 samples for testing, including the three they produced themselves. • It was agreed that the sample size would be 500mL which the laboratory would split into a 100mL aliquot and a 400mL aliquot for analysis. • The types of containers and the cleaning process for the containers had been agreed. • 10ng/l had been agreed as the maximum uranium concentration for the unspiked urine to be used in the study. There was some discussion regarding this, and whether a higher concentration could be allowed. It was agreed that the three laboratories would report the uranium concentration of the unspiked urine to the Secretary who would consult with DUOB members regarding its suitability. 	<p>Secretary (17/1/03)</p> <p>Secretary (17/1/03)</p>

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	<p>e) Peter van Calsteren detailed the decision that had been made with regard to the uranium standard to be used in the extended pilot exercise. The method by which any high quality laboratory calibrates the isotopic composition of a metal is to measure it repeatedly against a metal of known isotopic composition. The most reliable metal for the latter is CRM112, natural uranium metal rod. Therefore, provided the pilot study referenced its measurements of isotopic composition to CRM112, a DU metal of less certain initial composition could be used for spiking the samples.</p> <p>f) Two main depleted uranium standards were discussed at the meeting of the laboratories on 12th November (names not included in these minutes):</p> <ul style="list-style-type: none"> • Standard 1. There has been some disagreement over the composition of this material as two separate measurements by the laboratory of origin (one in 1976 and one in 2002) have produced slightly different results. However, the deviation is small and the composition could be measured to greater accuracy in the pilot studies using MC-ICPMS. Unfortunately, there is a delivery time of 3 months for this material • Standard 2. The exact composition of this DU is unknown. However, initial tests by one of the pilot study laboratories had indicated that it would be suitable for the pilot exercise. This material was available immediately. <p>The decision was made, because of the timescales, to use Standard 2 for the pilot exercise. This would be calibrated against the CRM112 standard. Peter van Calsteren had supplied a quantity of this metal to the laboratory producing the spiking. As a fallback plan, Standard 1 has also been ordered and should arrive in three months. If this arrives early there may be the possibility of utilising it in the pilot exercise in some way.</p> <p>g) At the laboratory meeting it had been concluded that thymol should not be added to the urine samples as an antibacterial agent. Brian Spratt undertook to check with his clinical microbiologist colleagues that this was unlikely to pose an unacceptable health risk to laboratory staff.</p> <p><u>Action 8.6. Brian Spratt to check on the use of thymol in urine samples</u></p> <p>h) It had also been agreed at the laboratory meeting that the urine should be acidified to 1% HNO₃ to prevent precipitation.</p>	<p>Spratt (31/1/03)</p>
<p>5.</p>	<p><u>Draft SOR for Main Contract</u></p> <p>a) The draft SOR for the main contract had been circulated before Christmas. The following comments were received:</p> <ul style="list-style-type: none"> • The timescale for the testing of the samples should be stated • The volume of the urine sample should be stated (when known) • Among other things, the testing laboratory should provide an estimate of DU concentration in the sample • Section 3 should be renamed 'Sample Plan' and include all information regarding the sample • The confidentiality procedures for the laboratory should be emphasised • The validation technique should be proven to the satisfaction of the independent DUOB and the MOD • The Section on validation of analytical method requires some work to clarify what is required 	

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	<ul style="list-style-type: none">• Generally, the requirement needs to be quantified• Other suggestions for minor changes. <p><u>Action 8.7. The Secretary undertook to produce a new version of the SOR and distribute.</u></p> <p>b) There was some discussion about how to interpret the results from the extended pilot exercise, particularly with regard to the need for a specialist statistician. The Chairman stated that he would consider the issue of analysing the results and whether specialist advice should be sought. George Etherington and Peter van Calsteren mentioned a number of contacts who might be able to offer advice and undertook to investigate this. The point was made that the method of analysing the data should be clearly defined by the time the laboratory measurements from the pilot exercise become available.</p> <p><u>Action 8.8. Chairman to formulate an analysis method for the pilot study results.</u></p> <p><u>Action 8.9. George Etherington and Peter van Calsteren to talk to contacts regarding interlaboratory analysis</u></p> <p>c) There was considerable discussion about how a laboratory which had not taken part in the pilot study would provide validation of its method when tendering for the main testing contract.</p> <p>d) There was further discussion about splitting samples, whether this was required and where it should be done if needed. Among other things, this would depend on the findings of the extended pilot exercise.</p> <p>e) Brigid Rodgers asked what would happen if a veteran was unhappy with his test result and requested another test. It was generally agreed that should a veteran request a re-test, this would have to be considered on its individual merits. Each individual would, of course, be free to have another test at another laboratory at their own expense.</p> <p>f) There was also discussion regarding the number of laboratories that would be involved in the main testing contract. The advantage of using more than one laboratory would be that some samples could be tested by both laboratories to provide an intercomparison. Members discussed how samples might be divided between a number of laboratories. It was generally agreed that each laboratory would receive batches of say 50 samples i.e. Lab 1 gets 50 samples to test and then Lab 2 get 50 samples.</p> <p>Post meeting note: The number of laboratories taking part in the testing programme has been discussed a number of times without resolution. The Secretary will issue an email canvassing further views on this subject so that a decision can be made at the next meeting.</p> <p><u>Action 8.11. Secretary to email board members regarding the number of labs to be involved in the main contract.</u></p>	<p>Secretary (24/1/03)</p> <p>Chairman (21/2/03)</p> <p>Etherington/ v Calsteren (21/2/03)</p> <p>Secretary (31/1/03)</p>
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6.	<p><u>Draft SORs for Health Provider and Background Study contracts</u></p> <p>a) The Secretary stated that he had produced very rough first drafts of these SORs some time ago. He had distributed these to DUOB members by email the day before this meeting to serve as a starting point for discussions. (It was noted that some members had not received these emails and the Secretary undertook to re-send them). The Secretary asked for comments on these SORs within two weeks as these were now his priority following this meeting.</p> <p><u>Action 8.12. Secretary to resend email with two SORs</u></p> <p><u>Action 8.13. DUOB members to provide comments on the SORs for the Health Provider and Background Study contracts.</u></p>	<p>Secretary (17/1/03) All 24/1/03)</p>
7.	<p><u>Other Issues For Main Contract</u></p> <p><u>Info to GPs/Veterans</u></p> <p>a) The Chairman stated that he had as yet done no further work on these items. The Secretary said that he had recently spoken to Muir Gray who had lined up some colleagues who would be able to help produce this information. The Chairman undertook to produce a new draft of this information so it could be passed to the relevant people.</p> <p><u>Action 8.14. Chairman to produce new draft of information to GPs/Veterans</u></p> <p><u>Epidemiological Studies</u></p> <p>b) The Chairman stated that there was little that could be discussed about new epidemiological studies until a valid test was available. He also pointed out that there was a meeting of the Military Health Research Advisory Group (MHRAG) at the MRC at the end of January – this meeting would look at the state-of-play on Gulf War issues and the need for further research.</p>	<p>Chairman (14/2/03)</p>
8.	<p><u>Timescales</u></p> <p>a) The Secretary stated that he had only managed to talk to one of the pilot study laboratories since the Christmas break but the planned schedule was as follows:</p> <ul style="list-style-type: none"> • Creation of spiking solution by end of Jan • Creation of spiked samples by end of Feb • Analysis of samples in March • Report in April <p>b) The Secretary undertook to produce a more accurate schedule when he had talked to all three laboratories</p> <p><u>Action 8.15. Secretary to produce schedule for extended pilot exercise</u></p>	<p>Secretary (31/1/03)</p>
9.	<p><u>DU Background and Scientific Issues</u></p> <p><u>US Laboratory Performance Paper</u></p> <p>a) This paper entitled 'Impact of Laboratory Performance of Urine Uranium Analyses on Exposure Evaluations for Gulf War Veterans' was distributed with the calling notice for the last meeting. Ron Brown perceived the US as taking a different approach to the UK in that they were only looking for levels of uranium that are considered clinically significant by most scientists. They</p>	

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	<p>were therefore looking at levels 10-100 times higher than in the work commissioned by the DUOB. The paper reported work that had been carried out some time ago and it was generally agreed that the information in this report was not immediately relevant to the DUOB discussions.</p>	
<p>10.</p>	<p><u>Biological Monitoring Policy</u></p> <p>a) The Secretary stated that the MOD Biological Monitoring Policy for DU on Operations had been discussed at the last DUOB meeting and a revised version had been distributed based on the comments received.</p> <p>b) Brian Spratt expressed disappointment that sample collection might take place up to a year after exposure. Ron Brown pointed out that this was for the voluntary tests and not for those classified as having potentially higher exposures i.e. Levels 1 or 2.</p> <p>Post meeting note: The relevant line in Biological Monitoring policy has been amended to 'Collection will take place as soon as practicable but within a year of exposure.'</p> <p>c) Brian Spratt also expressed concern that the results of the monitoring would be assessed against the results of background uranium in urine levels determined through the work currently being overseen by the DUOB. He thought this was inadequate and it would be better to use a military population. There was a discussion, culminating in a number of ideas for further research including:</p> <p style="padding-left: 40px;">a. Determination of background urinary uranium levels in military personal (on the basis that they may be different from background levels in the general public).</p> <p style="padding-left: 40px;">b. Determination of urinary uranium levels in military personnel post operational deployment to assess any difference from 'a' in different working groups (eg Field Hospital staff, EOD staff).</p> <p style="padding-left: 40px;">c. Personal occupational hygiene monitoring in operational situations to assess actual exposures to dust potentially contaminated with DU.</p> <p>It was likely that the Chairman would raise this topic at the MHRAG meeting hosted by MRC at the end of January when he talked about DUOB activities.</p>	
<p>11.</p>	<p><u>Date of next meetings</u></p> <p>a) A prospective date for the next meeting is 11th March 2003. The Secretary will confirm this nearer the date.</p>	
<p>14.</p>	<p><u>A.O.B.</u></p> <p>a) Malcolm Hooper mentioned a forthcoming paper on 'burning semen' which he believes affects some veterans. [Malcolm _ Can you please provide a reference and further details]</p> <p>b) The Secretary tabled a paper entitled 'Epidemiology : strengths, limitations and interpretation. Application to studies of low-dose radiation' by G Howe, Columbia University which had been provided by Brian Spratt</p>	

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Distribution:

All members

All observers

Devolved Health Administrations

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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)
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	Secretary	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
4.1	18/4/02	17/6/02	Secretary to improve content and presentation of DUOB website	Secretary	COMPLETE
4.2	18/4/02	7/6/02	OB Members to provide comments on DUOB website to Secretary	All	COMPLETE
4.3	18/4/02	17/5/02	Secretary to contact RS re. distribution of RS paper	Secretary	COMPLETE – Missing reports distributed
4.4	18/4/02	16/4/02	Secretary to circulate the MOD research proposals	Secretary	COMPLETE – Sent 26/4/02
4.5		17/5/02	Secretary to edit and distribute protocol document	Secretary	COMPLETE – sent by email 20/5/02
4.6	18/4/02	ASAP	Secretary to arrange for the two bidders to requote for pilot exercise	Secretary	COMPLETE
4.7	18/4/02	26/4/02	Secretary to arrange for pilot study contracts to be placed	Secretary	COMPLETE - 5 contracts placed on 29/4/02
4.8	18/4/02	26/4/02	PvC to visit NEQAS in the week beginning 22/4	Van Calsteren	COMPLETE - Overtaken by events
4.9	18/4/02	17/6/02	Secretary to draft advert for main testing contract for approval for the DUOB	Secretary	COMPLETE – Draft circulated prior to 5 th DUOB meeting
4.10	18/4/02	11/6/02	Muir Gray to produce a paper on sample collection/provision of advice	Muir Gray	COMPLETE - Papers distributed on 17/6/02
4.11	18/4/02	17/5/02	Chairman to produce a draft of information to be given to GPs	Chair	COMPLETE – Circulated by email on 24/4/02
4.12	18/4/02	17/5/02	RBL reps to produce a draft of advance advice to veterans and advice once results are known	Green/Gilmore	COMPLETE – Circulated by email on 20/5/02
4.13	18/4/02	17/5/02	Secretary to circulate the McDiarmid paper on spot samples	Secretary	COMPLETE – distributed on 16/7/02
4.14	18/4/02	17/5/02	Suggestions for ways of communicating the availability of voluntary testing	All	COMPLETE
4.15	18/4/02	17/5/02	Chairman to write to MRC re. epidemiological studies	Chair	COMPLETE – letter sent on 24/5/02
4.16	18/4/02	17/5/02	Chairman to discuss research with LSHTM	Chair	COMPLETE – discussed following 4 th meeting
4.17	18/4/02	17/5/02	GVIU to report on MOD research into health effects of DU	GVIU	COMPLETE – post meeting note in minutes of 4 th meeting
4.18	18/4/02	17/5/02	Secretary to distribute new schedule	Secretary	COMPLETE – circulated by email on 22/5/02
4.19	18/4/02	17/6/02	Muir Gray to produce report on the potential for screening for myeloma ...	Muir Gray	COMPLETE – tabled at meeting on 17/6/02
4.20	18/4/02	17/5/02	GVIU to check if abdominal ultrasound is a standard procedure at the MAP	GVIU	COMPLETE – post meeting note in minutes of 4 th mtg
4.21	18/4/02	17/5/02	Secretary to circulate web address of the UNEP report	Secretary	COMPLETE – post meeting note in minutes of 4 th mtg
5.1	17/6/02	24/7/02	Secretary to collate and distribute all information regarding Italian peacekeeper discussion	Secretary	COMPLETE
5.2	17/6/02	24/7/02	Chris Busby to write a short introduction to the Italian peacekeepers information	Chris Busby	COMPLETE – tabled at DUOB mtg on 24/7/02
5.3	17/6/02	24/7/02	Secretary to check on ultrasound diagnoses of renal cancer at MAP	Secretary	COMPLETE – details given at DUOB mtg on 24/7/02
5.4	17/6/02	28/6/02	Peter van Calsteren to obtain uranium and zinc concentration data from NEQAS	PvC	COMPLETE
5.5	17/6/02	28/6/02	Secretary to revise and distribute draft	Secretary	COMPLETE

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			advertisement		
5.6	17/6/02	24/7/02	Secretary to redraft SOR and distribute	Secretary	COMPLETE – new draft circulated on 28/8/02
5.7	17/6/02	24/7/02	Len Levy to investigate if creatinine can be measured in acidified urine	Len Levy	COMPLETE - comments circulated by email on 26/7/02
5.8	17/6/02	24/7/02	Muir Gray to produce ‘pathway’ for testing process	Muir Gray	Ongoing
5.9	17/6/02	24/7/02	Chris Busby to write paper on sample security	Chris Busby	COMPLETE – tabled at DUOB meeting on 24/7/02
5.10	17/6/02	24/7/02	Chairman to provide a more detailed paper on information for GPs	Chair	Ongoing
5.11	17/6/02	24/7/02	Chairman to produce next draft of ‘information to veterans’	Chair	Ongoing
5.12	17/6/02	24/7/02	Secretary to obtain a copy of the MAP questions	Secretary	COMPLETE – MAP questions sent to Malcolm Hooper prior to 24/7 mtg
5.13	17/6/02	24/7/02	Malcolm Hooper to draft screening programme questionnaire	Malcolm Hooper	COMPLETE – Questionnaire tabled at DUOB meeting on 24/7/02
6.1	24/7/02	2/8/02	Secretary to distribute full protocol to DUOB	Secretary	COMPLETE - distributed by email on 25/7/02
6.2	24/7/02	9/8/02	NEQAS to provide full report on pilot study	Andrew Taylor	COMPLETE – distributed on 12/8/02
6.3	24/7/02	23/8/02	Secretary to amend minutes of 5 th DUOB and circulate	Secretary	COMPLETE
6.4	24/7/02	21/10/02	Malcolm Hooper to provide list of Professor Schott’s relevant publications	Malcolm Hooper	Ongoing
6.5	24/7/02	30/9/02	George Etherington to investigate NRPB work on maximum size particle that can pass through kidney	George Etherington	COMPLETE – Paper circulated by email on 2/10/02
6.6	24/7/02	20/9/02	DUOB members to send Malcolm Hooper suggestions for any further amendments to the questionnaire	All	Ongoing
6.7	24/7/02	11/10/02	Malcolm Hooper to produce 2 nd draft of questionnaire	Malcolm Hooper	Ongoing
6.8	24/7/02	9/9/02	Members to send comments on Chris Busby’s ‘Security’ paper to Secretary	All	Ongoing
6.9	24/7/02	30/9/02	Secretary to provide SOR for Health Service Provider for urine testing programme	Secretary	COMPLETE – Overtaken by 7.10
6.10	24/7/02	16/9/02	DUOB members to write to Secretary with suggestions for a body to carry out the ‘Background’ study	All	Ongoing
6.11	24/7/02	30/9/02	Secretary to provide SOR for ‘Background’ study	Secretary	COMPLETE - Overtaken by 7.11
6.12	24/7/02	31/7/02	Chairman to inform Medical Research Council of delays in establishment of screening programme	Chair	COMPLETE – letter sent on 25/7/02
6.13	24/7/02	6/9/02	Secretary to ascertain whether a limited AMS study was feasible in terms of laboratory availability and cost	Secretary	Ongoing
7.1	21/10/02	8/11/02	Secretary to amend minutes of 6 th DUOB and circulate	Secretary	COMPLETE
7.2.	21/10/02	8/11/02	Secretary to circulate minutes of Laboratory meeting on 13/8/02 and the Chairman’s ideas on the next stage of the pilot exercise	Secretary	COMPLETE
7.3.	21/10/02	15/11/02	David Lewis to forward ‘Chromosome Aberration’ papers to Secretary	David Lewis	Ongoing
7.4	21/10/02	15/11/02	Secretary to circulate ‘Chromosome Aberration’ papers	Secretary	Ongoing

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7.5.	21/10/02	15/11/02	Comments on questionnaire to be sent to Secretary	All	Ongoing – no comments received
7.6.	21/10/02	15/11/02	Secretary to produce a summary document detailing what is happening with the pilot studies	Secretary	Ongoing
7.7.	21/10/02	1/11/02	Secretary to redraft SOR/Protocol	Secretary	COMPLETE – Distributed before Xmas
7.8.	21/10/02	1/11/02	Secretary to arrange meeting with labs to discuss SOR/Protocol	Secretary	COMPLETE – Meeting held on 11 th November 2002
7.9.	21/10/02	15/11/02	Secretary to circulate mortality figures	Secretary	COMPLETE – Circulated on 6/11/02
7.10.	21/10/02	15/11/02	Secretary to revise and circulate SOR for Health Provider contract	Secretary	Ongoing
7.11.	21/10/02	15/11/02	Secretary to revise and circulate SOR for Background study	Secretary	Ongoing