

**Witness Statement for Tribunal Case
Don Battersby and Anna Smith**

vs.

Secretary of State for Defence

Richard Bramhall

1. I Richard Bramhall of XXXXXXXXXXXXXXXXXXXXXXXX have been asked to give evidence about the discussions in and outcome of the Committee Examining Radiation Risks from Internal Emitters (CERIE) and other dialogues concerning the health effects of exposures to internal radionuclides. I am company secretary of the Low Level Radiation Campaign (LLRC), an NGO which, since 1995, has been closely involved in the arguments and scientific evidence for an error in the risk estimates of the ICRP. I am responsible for the website www.llrc.org and was the Editor of the publication *Radioactive Times*. My role has always been one of trying to communicate complex arguments to a lay readership.
2. I am now semi-retired. I work in support of my wife's restaurant business and as a carer for my elderly father. I was trained as a double bass player and worked professionally as a member of the orchestra of the Royal Opera House and of the Royal Philharmonic Orchestra, and as a freelance player with the London Symphony Orchestra, the English Chamber Orchestra and many others. Since I was not trained as a scientist I will, with one exception, avoid arguing the merits of the various scientific issues nor the disagreements which have arisen during the discussions and dialogues I have been involved in. Rather I will address the way in which the dialogues acted and reported, with particular emphasis on CERIE.
3. The one scientific issue I can not avoid discussing is that over more than 20 years in this field it has become apparent to me that the main stream of opinion in radiation protection has painted itself into a corner by applying a concept of "dose" which is an average over large volumes of tissue even although it is obvious that some kinds of radioactive contaminants must, when internalised, expose very small cell populations to vast and potentially damaging intensities of ionisations while leaving other tissues unaffected. Challenges to this approach are dismissed in terms of lack of evidence; when evidence such as cancer increases after Chernobyl are adduced they are dismissed on the grounds that the risk model does not predict them.
4. CERIE was set up in 2001 by Rt. Hon. Michael Meacher, then Minister of State for the Environment, and Rt. Hon. Yvette Cooper, then Parliamentary Under-Secretary of State at the Department of Health. This

followed four years in which LLRC spearheaded a campaign opposing a European Council Directive of 1996 which proposed a large relaxation in the UK's existing safeguards over the release of radioactively contaminated materials into open markets for recycling and reuse. This campaign had had a significant impact and ultimately succeeded in preventing the Directive's "free release" provisions from being transposed into national standards in several member states including the UK. In 1999 I talked to my constituency MP Richard Livsey (later Lord Livsey of Talgarth) about the problematic methodology behind estimates of radiation risk. He asked Mr. Meacher to meet me and Dr. Busby. In the event Mr. Meacher chaired three meetings during 2000. I attended the first with Mr. Livsey, Dr. Busby, Molly Scott-Cato (now an MEP), and Catriona Black a research assistant for the SNP. There was a subsequent meeting attended by Dr. Busby, Professor Scott-Cato, me, and various civil servants, and a third attended by Dr. Busby, Professor Scott-Cato, me, Dr Roger Cox, then Director of the National Radiological Protection Board, and Dr. Colin Muirhead, an epidemiologist at NRPB.

5. Discussions at that time included reference to advice from the Spongiform Encephalopathy Advisory Committee which, not long before, had turned out to be wrong causing long-term embarrassment to ministers and civil servants especially when dealing with their opposite numbers from other countries. This, and the ongoing campaign opposing "free release" of radioactivity, lay behind CERIE's establishment as an oppositional committee. On my advice, Mr. Meacher invited participants from various perceived lobbies: three senior representatives from NRPB - the above-mentioned Drs Cox and Muirhead plus Dr. John Harrison can be seen as defending the International Commission on Radiological Protection (ICRP). Academics with experience of radiation issues were Professor Eric Wright of Ninewells Medical School, Dundee, Professor Jack Simmons of the University of Westminster. Professor Dudley Goodhead, MRC Radiation and Genome Stability Unit was another such academic and was CERIE's chair. Another was Dr Philip Day, University of Manchester, who (to the best of my belief) was nominated by Friends of the Earth - certainly a nominee from FoE was on my list - but once committee meetings had begun Dr. Day he said he did not represent FoE. Likewise Pete Roche was nominated by Greenpeace UK though he subsequently repudiated this association. Declared critics of ICRP were myself representing LLRC and Dr Chris Busby, Director of Green Audit who was and remains a Director of the LLRC. Dr Richard Wakeford, of British Nuclear Fuels Ltd. can be seen as representing the nuclear industry. I had not suggested inviting Professor Sarah Darby, of the ICRF Cancer Epidemiology Unit, University of Oxford; I heard later that she was included at the behest of Professor Goodhead but I do not know whether this is true.
6. The purpose and thrust of what I will say is that, in my opinion as a member of the committee and thus as a witness who attended the whole

of every meeting, the CERRIE process was skewed by bias and manipulation to the extent that the committee failed to meet the remit explicitly laid down by the Ministers. As can be seen from page 3 of the CERRIE Minority Report (attached), the remit was to produce a final report agreed by all the committee members, defining the essential areas of agreement and explaining any remaining areas of disagreement together with recommendations for research to resolve them.

7. I should point out that we were able to nominate one person to the 3-person Secretariat. This was Paul Dorfman. As can be seen from page 3 of the Minority Report, another Secretariat member - Marion Hill - resigned less than half-way through the committee's life with a letter accusing the Chair and the third Secretariat member - Dr. Ian Fairlie - of bias. Ms. Hill predicted even at that early stage that the problems would compromise the chances of reaching an agreed report.
8. CERRIE held 16 plenary meetings and a three-day international conference at St. Catherine's College Oxford, July 21 - 23 2003 at which an interim report was presented. It attracted poor reviews from the invited guests. Mr. Meacher had been sacked on 13 June 2003.
9. Dr. Busby and I were not involved in producing drafts for the final report. We were not told who was writing them. The drafts did not represent our views and we found it difficult to propose amendments. We were reduced to writing dissenting texts, proposing that these should appear in parallel with the texts we didn't agree with. There were objections on the grounds of space. We did not agree with these objections and at two plenary meetings committee members voted to include our dissenting texts with only one member voting against.
10. Professor Goodhead repeatedly referred to "offensive material" and "possibly libellous material" in the draft Dissenting Statement. I repeatedly asked for the offending passages to be identified but none were. However, the last meeting (June 24th 2004) began with the Chairman tabling legal opinions which had been provided by two unnamed people whom the Chairman referred to as "departmental lawyers". The opinions stated that committee members might be found liable if the final report contained libellous material. They did not specify any libels but some members claimed to be worried. Dr. Day proposed a motion that the dissenting statements be excluded. This was put to a vote and carried by four votes in favour (Day, Roche, Simmons, Wright), two against (Bramhall, Busby) 2 abstentions (Harrison, Muirhead), the other members being absent.
11. The Introduction to the official Report repeats the allegations that "the drafts contained possible libellous statements". These allegations have never been substantiated.
12. In September 2004 the excluded views were published as a Minority Report with a foreword by the ex-Minister Mr Meacher, and is provided

as evidence. A most important part of the report was evidence brought by two eminent Russian scientists Prof Alexey Yablokov and Prof Elena Burlakova about the real health and genetic effects of the Chernobyl accident. This was brought by them to the 2003 CERRIE international conference in Oxford, but the official report contains none of it. More recently, 2009, one of these scientists has published and added to this evidence (Yablokov et al 2009, Busby and Yablokov 2006).

Furthermore, the ex-Secretary of the ICRP, Dr Jack Valentin, agreed in an interview in 2009 that the ICRP had been remiss in not taking into consideration the serious effects on health of the Chernobyl accident contamination and that there were large uncertainties in the health effects of internal exposures.

13. The CERRIE proceedings were all recorded by me on high resolution digital tapes, which I hold.
14. The minutes of meetings were seldom accurate and excluded important discussions. This made it necessary for me to spend much time listening to the tapes and correcting the draft minutes.
15. COMARE's 9th Report, which advised the Departments on CERRIE's findings, confirmed that the Majority Report had failed to identify the reasons for the lack of consensus.
16. It is important to note that CERRIE involved a search for hard evidence about the safety of the radiation risk model. In addition to the plenary meetings there was an epidemiological sub-committee, of which I was a member. Its purpose was to investigate real data which would throw light on the issue of the effects of internal exposures. Three studies were suggested. The easiest and most important was a study of female Breast Cancer in the wards close to the estuary of the River Blackwater, Essex, which is contaminated with radioactive discharges from Bradwell nuclear power station. It was determined that this would proceed as a joint exercise for Wakeford, Muirhead and Busby to carry out the same analysis of official and available small area mortality data to see if there were a statistically significant breast cancer excess near the contamination. The Committee's task was to obtain the data but this was never done, for reasons which have not been adequately explained. Eventually, as the Committee came towards the end of its life, the project was abandoned.

Other processes I have been involved in

17. European Parliament's STOA (Science and Technology Options Assessment) workshop 1998

In 1998 the European Parliament's STOA (Science and Technology Options Assessment) was asked to organise a one-day workshop on *criticisms of ICRP risk models*. Probably a

hundred or more people including me attended. Scientists from Europe, UK, USA and Canada gave presentations stating or suggesting that the ICRP approach to radiation was inadequate. Abstracts were published. Reporting of the proceedings was contracted to Professor Assimakopoulos, a physicist with a long professional involvement in radiation protection. When the MEPs who sponsored the workshop saw his draft report they submitted 21 pages of detailed criticisms and amendments which amounted to an accusation that, rather than report what the critics had said about the validity of the ICRP, Pr. Assimakopoulos had written his own opinion, which was that ICRP was secure. The MEPs have told me that their letter was ignored but I have never seen the final report. European officials have told me they cannot find it. The STOA Unit's list of publications includes only the abstracts. (I hold copies of the draft report, the MEPs' letter and the abstracts.)

18 SAFEGROUNDS and *Perspectives on the health risks from low levels of ionising radiation*

Between 1998 and 2012 I took an active part in the SAFEGROUNDS dialogue. SAFEGROUNDS brought together people from the nuclear industry, site holders, regulators, local authorities, NonGovernment Organisations, with statutory bodies such as the Nuclear Decommissioning Authority and the National Radiological Protection Board (NRPB) to create good practice guidance for the management of radioactively contaminated land. It has been widely recognised for its longevity and for successful collaboration between organisations which usually tend to be antagonistic. I consistently heard of industry and regulators expressing surprise at SAFEGROUNDS' success in retaining such a wide range of opinion and achieving consensus. An Atomic Weapons Establishment representative told me that AWE only remained in the group because I was there.

At an early stage SAFEGROUNDS recognised that differences of opinion on the reliability of ICRP's recommendations would be a recurring feature of stakeholders' discussions on the future of specific plots of land. A sketchy account of how this might affect perceptions of risk was published and we got on with drafting guidance. Later I reminded the secretariat that my continued participation depended on a more thorough treatment. The secretariat negotiated with interested parties. NRPB were extremely reluctant to address the topic at all but agreed to a paper exercise. Unlike every other aspect of SAFEGROUNDS, this was not at all collaborative. There was to be no scope for negotiation and no dialogue on the scientific issues. The idea was to provide end-users of the Guidance with an outline of the radiation risk arguments that nuclear liability holders might hear from various stakeholders. Three protagonists - NRPB, me for LLRC, and Paul Dorfman for the Nuclear Consultation Group - were invited to write position statements. Then a contractor, David Collier, delineated the different views. So it was only an attempt to reach consensus if agreeing to disagree is a consensus but, in the end, even that was too much for NRPB and they rejected the Collier paper, stating:

In attempting to provide a balanced account of the views submitted [...], the summary document does not do justice to the substantial body of evidence on radiation risks, accrued over many decades, providing an international scientific consensus. The report does not present a detailed scientific review of the data and so it cannot be used to resolve the debate or provide recommendations.

I wrote in response that NRPB was
applying cultural rather than scientific considerations; the weight of opinion is irrelevant – scientific method requires that a single credible piece of evidence that falsifies the predictions of a theory is enough to destroy the theory.

Long before SAFEGROUNDS published the outputs NRPB posted its own paper on its own website, including some personalised and demeaning criticism of me in terms of *extreme minority views [which] rely on selective use of data to support the contention that radiation risks have been underestimated. In fact, the data do not support their beliefs . . .*

The contractors who ran SAFEGROUNDS told NRPB their actions *certainly contradict[ed] what SAFEGROUNDS is all about* and demanded removal of the contentious statements but around the same time SAFEGROUNDS' funding was cut off.

NRPB's paper has since been published in the Journal of Radiological Protection, minus any mention of SAFEGROUNDS but complete with a basic mistake about the Secondary Photoelectron Effect as it applies to Uranium in body tissue.

I have referred to these episodes because they illustrate a problem of culture which I have encountered many times in this field. It can be expressed as denial of inconvenient evidence and invalid argument concerning such evidence, leading to marginalisation of its proponents. I have experienced the same during:

- the Health Protection Agency's 2009 dialogue on applying ICRP's 2007 Recommendations in the UK (NRPB having become part of HPA by then),
- the Nuclear Decommissioning Authority's Waste Issues Group (part of the NDA National Stakeholder Dialogue) between 2006 and 2009,
- Committee on Radioactive Waste Management 2006 - 7 (CoRWM 1),
- the Environment Agency from 1999,
- and the UK Department of Energy and Climate Change's Nuclear NGO Stakeholder Group from 2012 to present day.

Richard Bramhall October 2 2015

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