



PARLIAMENTARY UNDER-SECRETARY OF STATE
FOR DEFENCE

59 DEC 1996

MINISTRY OF DEFENCE

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D/US of S/FH 4270/96/M

6th December 1996

Dear Mr. Taylor.

Thank you for your letter of 1 November (reference: 342/96/mt/ejh) to Michael Portillo in which you ask about human radiation experiments carried out at Government establishments. I am replying as this matter falls within my area of responsibility.

My Department has already confirmed in response to a number of Parliamentary Questions tabled in the last year or so on this subject that studies involving the use of radioactive material have been carried out at Aldermaston and Porton Down. Some of these date back to the 1950s. Due to the passage of time and the lack of detailed documentary evidence, I cannot provide all of the information you seek but I hope you will find the following useful. I should, however, emphasise at the outset that there is no evidence of any Ministry of Defence involvement in unethical radiation experiments on humans.

AWE Aldermaston were involved in three groups of experiments in the 1980s in which volunteers inhaled polystyrene microspheres labelled with Nb-92m (with a 12 day half life) and Tc-99m (with a 6 hour half life); Tc-99m, incidentally, is one of the most commonly used diagnostic isotopes in medical research. The volunteers were then measured by whole body monitors used throughout the UK and in the US for the purpose of the international standardisation of lung measurements. All the inhalations were undertaken at Harwell using purpose built equipment; the experiments were approved by the Harwell Medical Ethics Committee and carried out with all due regard for the health and safety of the participants.

Matthew Taylor Esq MP

7/12



As regards Porton Down, two types of experiments involving the use of short lived radioactive material as a tracer in volunteer studies were carried out in the 1950s and 60s. Exact dates are not known. The first series of studies were designed to investigate the amount of radioactive fall-out which might be expected to adhere to the fabric of the clothing worn by volunteers when crossing contaminated ground; and how best that contamination could be removed. The volunteers wore film badge dosimeters to indicate whether exposure to measurable levels of ionising radiation had occurred. The whole process took no more than fifteen minutes to complete and the estimated whole body exposure was 0.005mSv which should be compared to the average natural background exposure in the UK of 1.87mSv per year. Fuller details of these studies can be obtained from reports held by the Public Record Office; the references are WO 189/118, WO 195/15302 and WO 195/15332.

The second type of study at Porton involved the use of radio-labelled compounds. These were also carried out in the 1950s and 60s and were to establish the mechanism of penetration of compounds through the skin. The radioactive labelling was required in order to trace the fate of the compounds in the body in the same way that other radio-labelled substances are used in medical research. The exposure involved a single application of the compound on the palm or forearm of the volunteer. I should emphasise that the use of such material has been standard medical practice for many years and the studies would not have been considered to present any hazard to those involved. Records of these studies are now no longer available but the use of radio-labelled tetra ethyl pyrophosphate in similar studies should be available from the Public Record Office under reference WO 189/123. It is impossible to confirm precisely how many volunteers were involved in both these types of studies but it is likely that no more than 200 individuals would have taken part.

All of the work involving volunteers at Porton has been subject to the provisions of the Nuremburg Code and the Helsinki Guidelines since their introduction. In addition, work carried out at the establishment is reviewed by a group of medical and scientific staff to ensure its integrity. Since the 1960s, the Committee for the Safety of Human Experiments and the Medical Subcommittee of the Defence Scientific Advisory Council have had the



role of formally reviewing volunteer protocols: and since 1991, the independent Ethics Committee has carried out this function. However, the bulk of the work involving the use of short lived radioactive material pre-dates these formal arrangements and it is believed a peer review of the proposed work by senior scientific and medical staff would have been in place at that time. The half lives of the materials involved in these studies is relatively short and the possible percutaneous doses so small that the hazard was deemed to be virtually nonexistent. For these reasons, no subsequent monitoring was deemed necessary.

All current work is approved by an Ethics Committee and a scientist's submission includes a lay statement which is read to all volunteers before they give their consent to participating in the studies. The lay statement is in non-technical language and explains precisely what is involved; it is read out to the volunteers to ensure there is no misunderstanding. Individuals have the right to withdraw from a study at any time, without having to explain their reasons.

The responsibility for any such studies carried out at Harwell now rests with the UK Atomic Energy Authority; you may wish to write to them directly.

Studies also took place in the 1960s and 1970s at the RAF Institute of Aviation Medicine(IAM) which involved the administration of clinical doses of a radioactive isotope of iodine and of inert gases. The isotopes were administered either by intravenous injection or by inspiration and served to provide a measure of changes in body fluid volumes through application of the dilution principle. All these involved volunteers, were conducted independently of the US and are now complete. (Since April, 1994, the IAM has, together with the Army Personnel Research Establishment(APRE), become the DERA Centre for Human Sciences. No such experiments were carried out at the latter establishment and none has been conducted at either since 1994.)

You ask whether such studies are ongoing. The position is that Aldermaston have not carried out such experiments other than those mentioned above; none are being conducted at Porton.



Finally, no fatalities or illnesses have resulted from these studies. As I have already explained, all such experiments have been conducted properly and with due regard for the health and safety of the individuals concerned.

Yours sincerely,

Frederick Howe

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