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1 2

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For use with Documents with Protective Markings up to and including

ATOMIC WEAPONS RESEARCH ESTABLISHMENT

Building [REDACTED]
Aldermaston, Reading, RG7 4PR
Telephone: Tadley 4111 (STD 073 56 4111)
Telex: 848104/5
GTN Dialling Code: 2026

MANAGEMENT : IN CONFIDENCE

Ext: 7119
Our Ref: SFS/A/26(RAF/WFT)
Your Ref: O/M3/53449
Date: 25 July 1985

DHSS, North Fylde Central Offices (War Pensions).

[REDACTED] () RAF Reg't. - Deceased.

I enclose a further comment on the case raised by the widow of [REDACTED]
[REDACTED].

The enclosure may be provided to the PAT and made available in accordance with the rules governing PAT operations provided that [REDACTED] has agreed that such documents can be made generally available in this manner.

[REDACTED]

[REDACTED] Sc, CPhys, FInstP.
Superintendent of Facilities Safety,
(Radiation Protection Adviser),
MOD(PE), AWRE, Aldermaston,
Reading Berks.

cc. PL(LS) Claims 2, MOD, FV
AD/Sc(Nuc)2, MOD, MB
DCMS(PE), MOD, ES
Med(F&S)2b, MOD, FV
D Med S(RAF), MOD, FV
ASG(EMR), MOD, FV

re. [REDACTED] RAF Reg't, Ret'd. - Deceased.

Please refer to the following documents:

- A) DHSS O/M3/53449 of 8 April 1983 and 30 December 1983
- B) Officer's Association: AA/3496A/Pens of 21 May 1985
- C) Medical Report, annexed to Ref B above, dated 10 April 1985
- D) SFS/A/26(RAF/WFT) of 20 April 1983 (Cancelled and Withdrawn)
- E) SFS/A/26(RAF/WFT) of 6 January 1984
- F) SFS/A/26(RAF/WFT) of 15 February 1984

1. Utilising the information now available and reviewed up to the present, it is justifiable to provide the following comments and additional remarks for the forthcoming PAT. They are provided by an impartial qualified and experienced professional health physicist who is a professional physicist.
2. Ref C, Page 2, Paragraphs beginning "It remains only", "In her report,", and "My interpretation....".

The distinguished consultant physician makes some interesting points, however he does not anywhere provide any guidance on what level of radiation dose has been shown to produce the carcinomas that he cites. [REDACTED] quoted minimum exposures of 300 rads (3 gray) - very high doses indeed. No doses are quoted by the consultant physician for the other three studies - my understanding, as a health physicist, is that in all cases the doses would have been substantial, although safe from a therapeutic or diagnostic viewpoint, but still high when compared with safe occupational exposures and certainly very high indeed when compared with the low levels of exposure sustained at Christmas Island by [REDACTED] even under the most pessimistic assessment assumptions. The consultant physician's report is unquantified and vague, and fails to refute the clear and rational view that [REDACTED] cancer was not caused, or significantly contributed to, by ionising radiations from the UK nuclear weapon test programmes.

In view of the differing advice on this topic it is clear that DHSS must now seek an impartial view from:

- a) the UK independent national advising centre on these matters which is The National Radiological Protection Board, Chilton, Didcot, Oxon.
Attention of [REDACTED], or
 - b) an independent specialist expert - [REDACTED]
c/o MRC/RBRU, Harwell, Didcot, Oxon.
3. Ref C, Page 1, Paragraph beginning "The sole problem", starting at sentence beginning "Unfortunately the relative documents".

In this section of his text the consultant physician is commenting in areas outside the area of his specialism, and also in areas where he did not have available to him sufficient information to enable valid and useful comments to be made: his principals presented him with an impossible task when they asked for these general views. The allegations and accusations made in this section of the report are unfounded and unsubstantiated; they are not correct as can readily be demonstrated without any doubt whatsoever: there is no evidence to support them. He also relies in this section for part of his speculations on the very shaky and also unfounded and unsubstantiated statements by some nuclear test participants to the Australian Royal Commission: most if not all of these statements fail internally on examination of their wording; at least one was made by a person proven to have been elsewhere than the place he claimed to have been in at the time concerned. On the other hand the Commission received a mass of contemporary

documents plus a large number of statements /

documents plus a large number of statements by witnesses, that were all well founded and substantiated, which showed that the radiological protection standards applied and the practices and achievements in protection and safety at the trials were of a very high order and compared well with the practices of the times and also of this day and age.

4. Ref C, Page 1, Paragraph beginning "The sole problem", starting at the quotation "but that information.....".

The quotation to which he refers is an interesting one because it demonstrates a part of his confusion: the erroneous entries were not in MOD held information, but were in a personal document compiled by [REDACTED] and the comment in Ref F was to draw attention to [REDACTED] errors in his personally compiled informal record, the precise opposite of the consultant physician's mistaken interpretation.

5. There is ample and clear fully supported contemporary evidence showing that the maximum radiation exposure that [REDACTED] could have received was about 1300 millirontgen (rounded off) but this is assessed to have been most unlikely: the most likely exposure was assessed to be about 800 millirontgen (rounded off) or less: MOD information leads to a level of only about 640 millirontgen, but the assessment has included [REDACTED] own personally recorded data where there is no clear error involved. From these, the effective dose equivalents are at maximum 8 millisieverts (800 millirem) and most probably 5 millisieverts (500 millirem) or less. The above assessments have no reasonable doubt associated with them, and they are in accord with the assessment in Ref F. They are low doses and do not constitute radiological dangers.
6. A comment on the abnormal event involving a cut from a pipette is justifiable. Pipettes were not allowed to be used in areas where there were significant levels of radioactivity. They were used for preparing counting samples of environmental liquids e.g. samples from drinking water supplies, which might be mildly radioactive because of the deposition of world-wide fall-out:- such levels were extremely low and of no significance to health. The level of maximum radiation dosage associated with the accident described has been assessed, on the most pessimistic credible assumptions: it is concluded that the maximum associated radiation dosage that could have been received would have been much less than 50 microsieverts (less than 5 millirem), which is a negligible dose, and was most probably very much less than 10 microsieverts (1 millirem) and not sensibly different from zero. As already stated in Ref F no record of radiation dose associated with the incident is in existence: in accordance with normal policy none would have been made or kept at a dosage level of less than 200 microsieverts (20 millirem); the lack of such a record is of course consistent with the estimates of dose now made.
7. Finally, if radiation could have caused the cancer from which [REDACTED] died, then it would have been caused also from the radiation doses from the ever present background radiations and radioactivity (about 2 millisieverts per year (200 millirem per year) on average) to which all persons are exposed throughout life and also by any medical or dental irradiations affecting the head. On the balance of probabilities such radiations are overwhelmingly more likely to have caused the carcinoma than the low levels of radiations from the UK nuclear weapon tests, if indeed it was caused by radiations at all.
8. In conclusion, the relatively low level of exposure from the UK nuclear weapon trials programmes sustained by [REDACTED] did not cause or significantly contribute to the carcinoma from which he died, and furthermore the balance of probabilities gives strong support to this conclusion.

← H.F. (Thy)

Pu-239 ICRP 30 Model

Committed dose equivalent from 1 Bq deposit intake to blood -

Organ (T)	H_{50} (CDE) Sv/Bq	WT	$W_T H_{50}$ (CDE) Sv/Bq
Gonad	2.6×10^{-4}	.25	6.5×10^{-5}
Red marrow	1.6×10^{-3}	.12	1.9×10^{-4}
Bone surface	2.1×10^{-2}	.03	6.3×10^{-4}
Liver	4.4×10^{-3}	.06	2.6×10^{-4}
			<hr/>
			11.5×10^{-4}
			ie 1.2×10^{-3} Sv/Bq
			<hr/>
			1.2 mSv/Bq

Sr-90

Committed dose equivalent from 1 Bq deposit intake to blood -

Organ (T)	H_{50} (CDE) Sv/Bq	WT	$W_T H_{50}$ (CDE) Sv/Bq
Red marrow	6.4×10^{-7}	.12	7.7×10^{-8}
Bone surface	1.4×10^{-6}	.03	4.2×10^{-8}
			<hr/>
			11.9×10^{-8}
			ie 1.2×10^{-7} Sv/Bq
			<hr/>
			0.12 μ Sv/Bq

SEE Pu-239

Source	Target	Value	Group
Ground	Ground	3.0×10^0 MeV g ⁻¹	} 3.0×10^0
Water	-	1.5×10^{-11}	
Cut Bone	-	1.4×10^{-10}	
Trib Bone	-	1.4×10^{-10}	
Ground	Red Marrow	1.7×10^{-10}	} 3.4×10^{-2}
Water	-	1.1×10^{-9}	
Cut Bone	-	6.0×10^{-8}	
Trib Bone	-	2.4×10^{-2}	
Ground	Bone Surface	2.2×10^{-10}	} 4.2×10^{-1}
Water	-	1.0×10^{-9}	
Cut Bone	-	2.1×10^{-1}	
Trib Bone	-	2.1×10^{-1}	
Ground	Water	7.2×10^{-12}	} 5.8×10^{-2}
Water	-	5.8×10^{-2}	
Cut Bone	-	3.5×10^{-10}	
Trib Bone	-	3.5×10^{-10}	

Number of Transforms in 50 years
U Pu-239

Ground	5.5×10^5
Water	4.7×10^8
Cut Bone	3.0×10^8
Trib Bone	3.0×10^8

$$H_{50}(T \leftarrow S) = U_S \times 1.16 \times 10^{-10} \times SEE(T \leftarrow S) \quad S - Bq^{-1}$$

Ground	Ground	$5.5 \times 10^5 \times 1.6 \times 10^{-10} \times 3.0 \times 10^0 = 2.6 \times 10^{-4}$
Red Marrow	Trib Bone	$3.0 \times 10^8 \times 1.6 \times 10^{-10} \times 3.4 \times 10^{-2} = 1.6 \times 10^{-3}$
Bone Surface	Cut Bone	} $3.0 \times 10^8 \times 1.6 \times 10^{-10} \times 4.2 \times 10^{-1} = 2.1 \times 10^{-2}$
	Trib Bone	
Water	Water	4.7×10^8 $4.7 \times 10^8 \times 1.6 \times 10^{-10} \times 5.8 \times 10^{-2} = 4.4 \times 10^{-3}$

Sr-90

SEE Sr-90

Source	Target	
Cut Bone	Bone Surface	$2.4 \times 10^{-5} \text{ McVg}^{-1}$
Trab Bone	Bone Surface	4.1×10^{-5}
	Red Marrow	4.6×10^{-5}

SEE Y-90

Cut Bone	Bone Surface	1.2×10^{-4}
Trab Bone	Bone Surface	1.9×10^{-4}
	Red Marrow	2.2×10^{-4}

Number of Transfers = 50 years

U	Sr-90	Y-90	
Cut Bone	3.6×10^7	3.6×10^7	Bq^{-1}
Trab Bone	1.5×10^7	1.5×10^7	

$$H_{50}(T \leftarrow S) = U_s \times 1.6 \times 10^{-10} \times SEE(T \leftarrow S) \quad \text{Sv Bq}^{-1}$$

T	S			
Cut Bone	Bone Surface	3.6×10^7	$\times 1.6 \times 10^{-10} \times (2.4 \times 10^{-5} + 1.2 \times 10^{-4})$	$= 8.3 \times 10^{-7}$
Trab Bone	Bone Surface	1.5×10^7	$\times 1.6 \times 10^{-10} \times (4.1 \times 10^{-5} + 1.9 \times 10^{-4})$	$= 5.5 \times 10^{-7}$
Trab Bone	Red Marrow	1.5×10^7	$\times 1.6 \times 10^{-10} \times (4.6 \times 10^{-5} + 2.2 \times 10^{-4})$	$= 6.4 \times 10^{-7}$

1.4×10^{-6}

From: [REDACTED] Senior Claims Officer



Ministry of Defence

PL(LS) Claims
First Avenue House High Holborn London WC1V 6HE

Telex 22241

Telephone:
01-4305704.... (Direct Dialling)
01-430 5555 (Switchboard)

[REDACTED] BSc, C Pys, F Inst P
Superintendent of Facilities, Safety
Atomic Weapons Research Establishment
Building A85
Aldermaston
Reading RG7 4PR

Your reference SFS/A/26(RAF/WFT)

Our reference D/PL(LS)/260003

Date 10 July 1985

1
em

[REDACTED]

PAT Cases - Article 4: [REDACTED] (502134)

As you know, at the request of Minister (DP), PL(LS) Claims has recently undertaken an investigation into Section 10 cases relating to the U.K. atmospheric nuclear tests which have been referred to the Pensions Appeals Tribunal after initial rejection by the DHSS of the claimants entitlement to an attributable award under the War Pensions Scheme. We have a special interest in those appeals dealt with under Article 4 of the Naval, Military and Air Forces etc. (Disablement and Death) Service Pensions Order 1983, as in these cases it falls to the Secretary of State (Social Services), rather than to the appellant, to prove beyond reasonable doubt that the illness or death of the claimant is not related to service. As became clear in the case of Saffery, it is going to be extremely difficult - if not impossible - to provide the PAT with, "proof beyond reasonable doubt", (or at least the Tribunal's interpretation of what constitutes reasonable doubt) when exposure to radiation is the point under discussion. It is obvious, therefore, that the DHSS Statement of Case must be prepared carefully, particularly in respect of the MoD's evidence, and we hope to provide the DHSS with advice on this wherever possible.


I attach a copy of a medical report on [REDACTED] [REDACTED] which has been prepared by [REDACTED] on behalf of the Officers' Association who are assisting [REDACTED] in her appeal. It is standard practice for the DHSS Statement of Case to be sent to the appellant for comments before it is forwarded to the Appeals Tribunal. As you will see, [REDACTED] has questioned the validity of [REDACTED] radiation record and as things stand it is easy to see that the presentation of the MoD evidence could well be misconstrued; at the very least the inconsistencies revealed will almost certainly be exploited by the appellant.

To help us counter any allegations casting doubt on [REDACTED] radiation record I would be grateful if you could comment on the following:

- a) Can we explain the inconsistencies between the AWRE reports of 20 April 1983 and 15 February 1984 - the former stating that [REDACTED] radiation exposure was zero but the latter detailing his work as a Radiation Safety Officer dealing with low level radioactive samples which gave rise to a quantifiable radiation record. Was it perhaps the case, for example, that the 20 February report was mistakenly based on a different [REDACTED]?
- b) What is the, "certain other information", referred to in paragraph 2b of the AWRE report of 15 February 1984 and how do we know that certain entries on [REDACTED] radiation record were erroneous?
- c) Is there any way of tracing information relating to the incident with the broken pipette (para. 3 of the report of 15 February 1984) ? To say that the incident cannot have been significant as there is no record is unlikely to help our case when the appeal is being dealt with under Article 4, particularly in view of the Saffery judgement.

The above are only the main points that occurred to me having read the medical report by [REDACTED]; you may be able to think of others. Nonetheless I am sure that you will be able to provide a comprehensive refutation of the allegations in [REDACTED] report and I look forward to receiving your comments.

Yours sincerely [REDACTED]



FROM [REDACTED]
60, MONTAGU SQUARE,
LONDON, W.1.

01-723 0433

MEDICAL REPORT ON

[REDACTED] deceased
of 4 Inholmes Close, Burgess Hill, Sussex.
Squadron Leader RAF [REDACTED]

I have read the documents in this case and feel justified in making the following observations:-

1. In spite of the [REDACTED] complaint there is no evidence that he ever had a carcinoma of the stomach. Repeated barium meals showed that he had a healed duodenal ulcer and there was no suggestion that this had become an ulcer cancer nor a mass.

2. There appears to be absolutely no doubt whatsoever that this man subsequently developed at the end of 1969 symptoms that were proved in an operation on 7th April 1970 (page 28) to be a large left temporal lobe glioma which proved to be a moderately well differentiated but invasive partially necrotic astrocytoma. There can be no argument about it that the cells were well differentiated and an experienced neuropathologist would not have mistaken a secondary for such a well differentiated glioblastoma. The claim, therefore, that he had a carcinoma of the stomach with secondaries in his brain as suggested by [REDACTED] must be rejected.

The sole problem that has^{to} be discussed is the possible relationship between the development of a glioblastoma in 1969 and the irradiation to which he was subjected some 10 years earlier when he was serving in Christmas Island close to nuclear tests. There are 2 problems. The first being as to whether he in fact was subjected to sufficient irradiation to have any effect at all. Unfortunately the relative documents from the Ministry of Defence really do appear either to have been written by someone who is extraordinarily inefficient producing entirely the wrong information at first or, worse, there is (an) even a suspicion that someone in the MoD attempted to conceal the fact that he had been exposed to radiation at all with a subsequent letter that appeared to me to be an attempt to have the earlier letters destroyed. This leads me to believe that the figures they have finally supported and which was stated as being below what was thought to be the safety level at that time could equally well be false. Therefore, I believe that we are entitled to take the view that we don't know for certain how much irradiation he received and that there is a possibility that it was too much. Sub-paragraph b on page 32 of the documents admits "but that information includes one known erroneous entry and a further entry which is probably erroneous.... if only the one known entry is conceded, it is possible but I consider

See page 30
of Medical History

...../2

improbable that the exposure might have been 1305 millirontgen." One might here recall that the recent judicial enquiry carried out in the United Kingdom by the Australian government over the A tests that were held in Australia suggest that some Service personnel were not only exposed to more irradiation than was safe but also that to some extent the records that were kept were either inadequate or fudged. It seems to me therefore, that the department in any case should concede that there is the possibility if not a probability that the amount of irradiation that he received was much greater than was recorded.

It remains only to examine the evidence that cerebral gliomas are never stimulated by irradiation. In this respect I would like to point out that I have not extensively studied the literature but [REDACTED], the Regional Consultant in Radiotherapy and Oncology states on page 34 in paragraph 2,


a. irradiation induced malignant astrocytoma have been produced experimentally in monkeys, quoting [REDACTED] 1976 and in rats [REDACTED] 1982. And states that the possible relationship in man is only recorded in 13 cases in the medical literature. This at least means that there is a dose of irradiation that can be produced experimentally in animals that will induce a glioblastoma. And she bases the rest of her advice that his case could be dismissed on her believing the statements as to his total exposure.


In her report, she quotes [REDACTED] and her co-workers in 1976 ^{own} tends to dismiss that report although in fact the irradiation was given with a minimum exposure of no more than 300 rads. This was a follow-up study of patients treated by x-rays for epilation for tinea capitis. This was a follow-up of 2000 patients in which the incidence of glioblastoma was 3. That is, a prevalence rate of 150 per 100,000 which is greater than normal incidence of these tumours. She does not refer to a case of another malignant tumour, an osteogenic sarcoma of the skull a paper by Meredith et al Journal of Neurosurgery 1960, Vol 17, pp 792-99 titled Osteogenic Sarcoma of Skull following Roentgen ray therapy for Pituitary tumour. There is a study she does not mention in California by Preston Martin et al The American Journal of Epidemiology 1978, Vol 108, pp 233-34 quoting a higher than usual incidence of glioblastoma in patients who had been subjected to diagnostic x-rays only, although repeated for dental treatment and for head trauma, and Modan et al in the Lancet 1974, Vol 1, pp 277-79 reporting on radiation induced head and neck tumours was a follow-up of 11,000 children followed up from between 11 - 22 years.

My interpretation of the papers is, that there is ample experimental evidence and evidence in human beings that what have been considered safe doses of x-rays for carrying out diagnostic x-rays or for minor treatment of skin conditions has been shown to be capable of stimulating the growth of malignant tumours including glioblastomas. It is for that reason that I would feel that it is up to the department to prove that there can be no connection between irradiation and the development of malignant tumours. And secondly, to prove they have absolute firm evidence

of the level of irradiation that this man received.

Date: 10. th April 1985

Signed: 

...
, M.D., F.R.C.P.
Honorary Consultant Physician to the
National Hospitals for Nervous Diseases
Queen Square & Maida Vale.
Honorary Consultant Neurologist,
St Thomas' Hospital.

MO

Reference O/M3/53449

Your reference SFS/A/26(RAF/WFT)
of 6. 1.84

MANAGEMENT IN CONFIDENCE

Atomic Weapons Research Establishment
Building A85
Aldermaston
READING
RG7 4PR

[REDACTED] [REDACTED]
RAF REGIMENT - DECEASED

Your SFS/A/26 of 6 January 1984 refers. Are you now in a position to reply to our letter of 30 December 1983 to Ministry of Defence, MA 2A (RAF) please?

[REDACTED]
for Head of War Pensions Branch
N6B3
R6176
Department of Health and Social Security
North Fylde Central Office

21st February 1984

safety precautions and in the duties of a radiation safety officer. He was an experienced officer in the radiation field having worked with ionising radiation since 1957 in his RAF service and he had attended an instructor's training course at the Joint School of Chemical Warfare which provided training in radiological safety. (Please note, JSCW, Winterbourne Gunner should be read for "RAF Station, Winterbourne Gurney" at c. in your letter dated 30 December 1983)

2. a) [redacted] radiation dose from the UK nuclear tests is assessed, from information available to me, to have been less than 5 millisieverts (less than 500 millirem).
 - b) There is certain other information which suggests that his exposure might have been 2305 millirontgens (20 milligray (air)) but that information includes one known erroneous entry and one further entry which is probably erroneous: leaving a potential exposure of 795 millirontgen (6.8 milligray (air)): again an effective dose equivalent of less than 5 millisieverts (less than 500 millirem). If only the one known erroneous entry is conceded, it is possible but I consider improbable that the exposure might have been 1305 millirontgen (11.3 milligray (air)); i.e. an effective dose equivalent of less than 8 millisieverts (approximately 800 millirem).
 - c) A dose of less than 5 millisieverts is low, being less than the annual limit of dose for individual members of the general public who may be exposed up to this limit year after year: such a dose is not dangerous. If the higher exposure of 1305 millirontgen were correct, a dose of less than 8 millisievert is also low being less than one third of the 3 rontgen current quarterly dose limit, less than one fifteenth of the current legal limit for a single year, and less than one sixth of the current limit on annual average dose since reaching age 18 years for occupational workers such as [redacted]. His exposure was only a fraction of the authorised exposure limit (3 rontgen) based on the International Commission on Radiological Protection recommendations, endorsed by the Medical Research Council, for the Operation Grapple Z programme. Such a dose does not constitute a radiological danger.
 - d) Having examined the circumstances, it is my professional assessment, as a professional physicist who is also a professional health physicist, that [redacted] radiation dose from UK nuclear tests was most probably approximately 5 millisieverts (500 millirem) or slightly less and improbably at most less than 8 millisieverts (800 millirem): these are very low doses and ones which did not constitute radiological dangers to [redacted] health or life.
3. Referring to your b., a cut hand from broken glass of a pipette containing mildly radioactive material, this incident occurred after the completion of the Operation Grapple Z programme and we have no information on the matter. Had there been any radiological effects or measurable radioactivity associated with such a wound, a record would have been made at the time and information on it would be available.
 4. [redacted] died from astrocytoma (a brain tumour) at the age of 49. It is my understanding, as a professional health physicist, that the occurrence of an astrocytoma is not positively correlated with radiation exposure at any level. However on this medical point you will wish to obtain professional medical advice.

[redacted]
FInstP.

Superintendent of Facilities Safety/AWRE

cc. DDP(RAF), MOD, FW
MA2a(RAF), MOD, FW
DCMS(PE), MOD, ES
S10g(Air), MOD, AD
Hd DSc3, MOD, MB
Hd DRPS, INM, Alverstoke
DS18b, Claims 1, MOD, FW
Treasury Solicitor's Dept.
SAO/GA, AWRE

████████████████████ AWRE

ATOMIC WEAPONS RESEARCH ESTABLISHMENT

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 Telephone: Tadley 4111 (STD 073 56 4111)
 Telex: 848104/5
 GTN Dialling Code: 2026

Management in Confidence

Ext: 6111

Our Ref: SFS/A/26(RAF/WFT)a

Your Ref: D/DD Med Org(RAF)/19/23 of 9 January 1984

Date: 16 February 1984

██████████ MA2a(RAF), MOD, First Avenue House, London.

Dear ██████████

The late ██████████

- (i) I have examined the Army Form A.21. This is clearly a document originally issued either at the then Joint School of Chemical Warfare at Winterbourne Gunner, Wiltshire (this should be read for RAF Station, Winterbourne Gurney at c. in the DHSS letter dated 30 December 1983) or, on ██████████ return to his own unit, at the RAF HQ at RAF Hillingdon. Entries on the form appear to have been made in ██████████ own writing so that it must, I believe, be regarded as a useful but informal personal record. It contains both film badge data and personal dosimeter data without in any way differentiating between them: this feature alone makes the A.21 contents of dubious value.
- (ii) The document also contains one serious transcription error ("1.52r" whereas the correct value is 0.52R); and there is a further entry which the balance of probability shows also to be a totally erroneous value (0.51R - this entry is considered to be a poorly transcribed repeat of the "0.52R" value already noted: a contemporary review in 1958 did not include this "0.51" value, although it was known then, when aggregating ██████████ exposures; and this supports my view and the view of those who compiled the Blue Book listings. I can see nothing to suggest that the 1958 review or the Blue Book compilation was wrong in this respect.
- (iii) The provenance of the entry "0.05r" in April 1959 is unknown - it is probably a personal quartz fibre dosimeter reading taken and entered by ██████████ himself. Such quartz fibre readings are usually greater than the true exposure values. In the circumstances, the value of 50 millirontgen (0.05R) must be accepted as an exposure from UK nuclear tests recorded by a dosimeter worn by ██████████.
- (iv) I therefore conclude that the radiation exposure as noted in the records of the film badges and other personal dosimeters worn by ██████████ as 670 millirontgen (5.9 milligray (air)) other information might make this up to 795 millirontgen (6.8 milligray (air)) which lead to an effective radiation dose equivalent from UK nuclear tests of less than 5 millisieverts (less than 500 millirem): it is possible but highly improbable that the exposure from the tests might have been 1306 millirontgen (11.3 milligray(air)) which leads to an effective dose equivalent of less than 8 millisieverts (800 millirem) from UK nuclear tests.
- (v) In the RAF in UK prior to the tests ██████████ recorded on his form exposures of 64 millirontgen (0.56 milligray (air)). Subsequent to the tests he also recorded on his form exposures of 55 millirontgen.


These exposures /

These exposures total approximately 120 millirontgens (approximately 1.04 milligray (air)), leading to an effective dose equivalent of less than 0.8 millicieverts (less than 80 millirem) in HM Forces other than when at UK overseas atmospheric nuclear tests.

I hope that the above gives you all you need.

Yours *aye*




SFS/AWRE

7/3
31/1/84
SFS/26

DEFENCE RADIOLOGICAL PROTECTION SERVICE
Institute of Naval Medicine
Alverstoke
GOSPORT
Hants PO12 2DL

Tel: Ports 822351 Ext 41105

466/24/113/DRPS

26 January 1984

Superintendent Facilities Safety
AWRE
B.A85
Aldermaston
READING
RG7 4PR

RADIATION DOSE RECORDS - RAF

1. The DRPS has checked its record and no trace can be found in respect of the following persons:

<u>NAME</u>	<u>REFERENCE</u>
ex [REDACTED]	SFS/A26(RAF/WFT) of 6 January 1984
ex [REDACTED]	SFS/A/26(RAF/PF) of 10 January 1984

[REDACTED]

Surgeon Captain RN
Head of DRPS

Information Addressees:

DhR (RAF)
DS 18R (Claims)

EB

Airline reports:- No information held on Service records details at AIRC. which would indicate radiation exposure.. (i.e. No film badges issued)

(502134)

- 6 - 24 June 1955. Joint School of Chemical Warfare, Winterbourne Gunner.
- 10 - 28 March 1958 " " " " " " " " " " " "
- 21 June 1958 MISC 1389 A Christmas Island (Grapple) Decontamination flight.
- 16 February 1959 MISC 1389 A Christmas Island (On change of command) Decontamination and Radio Active Handling flight.
- 10 April 1959 Air Ministry Unit (Deplaned 15 April)
2 days T/duty at Aldermaston (debriefing?).
- 15 - 19 January 1962 Supernumerary for duty with Vixen B to attend course
- 21 February - 30 June 1962 Air Ministry Unit, Duty with RAF/AWRE.
- 20 August 1962 - 26 October 1964 Special Safety Training Officer, Catterick.
- 26 October 1964 - to termination of Service BN Band C School, Projects Office. Winterbourne Gunner.

Placed on retired list on account of medical unfitness 23 June 1965.
Age 44.

Died 8 October 1970 Age 49.

Assumed cause of medical discharge duodenal ulcer.

Cause of death Astrocytoma (Brain tumour)

DOB [REDACTED]

[F. Med 4 mentions hand cut by glass pipette used for mildly R/A material.]

No accident report or other documentation of incident reported.

Blue Book:-

[REDACTED]	RAF	Fl/Lt	Grapple Z	1958	120 mem.	HP
"	"	"	"	RM	520	HP
"	WF. RAF Reg.	Fl/Lt.	[REDACTED]	Grapple Z	1958	Nall Planning.

Archives. Box K 3435 files 12 and 13.

1. "Results for personnel not on regular film badge list" (Hand written)

[REDACTED]	Fl/Lt	RAF	Dose	0.51	"
"	"	"	"	0.12	"

2. Note:- [REDACTED] to [REDACTED] (MURE Bldg. A38).

"Please add to Grapple Z lists following doses registered on badges produced since the end of the trial. Misc. Air Force: [REDACTED]: [REDACTED] MF 0.12 rads"

3. Note:- [REDACTED] to [REDACTED] (MURE Bldg A38)

"Radiation Doses Grapple Zulu in Roentgens (minimum detectable 20 milli roentgen) Other servicemen are only shown if their dose exceeds 20 mR.

[REDACTED] RM (RAF) 0.52:

4. [REDACTED] not listed as member of Active Handling Flight.

5. [REDACTED] Dose 0.51 Misc Air Force. Annexure 'D'.

6. Radiation Dosage Record Sheets. [SRI Grapple G13]

	Film Dose	SH	Dosimeter Dose.
25.9.58	—		0.02
24.9.58	—		0.025
23.9.58	0.28		0.12
2.9.58	Nil	(HP)	—
approx 24.8.58	0.08	(RH)	0.045
22.8.58	0.07	(RH)	—
22.8.58	—	(RM)	0.06
22.8.58	—		—

- 9.58 (HP) See RM Grp.) --- Sheets

1 August to 1 September RM As Blank NIL
 RM (HP) 0.09

[It is difficult to total 0.52 and 0.12 from the above dosages.]

7. Grapple Z Interim Report (W0051)
 Part 12. RM Group.

[redacted] + 13 RMF personnel. Health Control Unit."

"Controlled areas defined, marked records left with inter-trials HP representative [redacted], RMF Regt, attached to RM group after a short period of training at AURIE."

"Health Control Points; Weapon Assembly, Decontamination area, Active Laboratories, Workshops, Forward Control, Balloon Site."



with the compliments of
MINISTRY OF DEFENCE

MW [REDACTED]

The attached ROS is
forwarded as requested in
telephone conversation of
20 Jan 84.

[REDACTED] (AF)

23.1-84

MOD FORM 195

P = POSTING
A = ATTACHMENT

(4) MOVEMENTS

H = HOME COMMAND
O = OVERSEAS COMMAND

DATE OF EFFECT	P/A	UNIT	GRP.	CMD.	H/O	DUTIES	RANK OF POST	AUTHORITY
26.11.51	P	RAF REGT. DEPOT. CATTERICK	22	TTC	H	1/4 SUPY WEAPON TRG CSE. ON APPT TO COMM		DSPH/TTC/5065/51
10.12.51-26.1.52	A	RAF REGT. DEPOT. CATTERICK	22	TTC	H	REGT. 12 WEAPON TRG. CSE.		DSPH/TTC/5126/51
28.1.52	P	SPL. DUTIES LIST / MISC / 1037 / AIR MINISTRY UNIT	61	HC	H	1/6 TRG. WING. JOINT SERVICES SCH. FOR LANGUAGES. COMUSDEV.	Flt/Lt	DSPH/TTC/2154/52
17.9.52	P	AIR MINISTRY UNIT	61	HC	H	SUPY		DSPH/SOL/708/52
2.10.52	P	EL HAMRA		MEAF	O	SUPY P.P.		DSPH/AM/2036/52
3/10/52	P	Air HQ Iraq		MEAF	O	Supy pp 2 Armoured Car Sqdn		DGP11/CS/3833/52
9/10/52	P	2 Armoured Car Sqdn		MEAF	O	adjutant	FG Off	DGP11/CS/3810/52
10/1/53	-	2 Armoured Car Sqdn		MEAF	O	Flt Cndr Post	Flt Lt	3924/52
26/9/54	P	5 Personnel Despatch Unit		HC	H	Supy disemb 7/10 d/lve+acc a/lve 8/10-26/11/54		DGP11/OS/2918/53
17-27/11/54	P	Officer Cadet Training Unit Jurby	22	TTC	H	Instr - Supy pending posting		DGP11/5PDU/3062/54
14/1/55	-	Officer Cadet Training Unit Jurby	22	TTC	H	Regt	Flt/Lt	DGP11/5PDU/3087/54 & 3507/54
6/6-24/6/55	-	Jurby	22	TTC	H	Regt - 82 Unit Instructors Cse @ Jnt Sch of Chem Warfare Winterbourne Gunner	Flt/Lt	TTC/86/55
31/10-24/12/55	A	Watchet	27	TTC	H	Off Officers LAA Cse		TT/959/55 & 1257/55
9/1 - 29/2/56	A	Watchet	27	TTC	H	Supy - to attend B1 Off LAA Conv Cse		TT/1245/55
31/10-24/12/55	A	Watchet	27	TTC	H			
9-13th July 56	A	Uxbridge	22	TTC	H	Supy - to attend 57 Short Security Cse		TT/763/56
20/4/57	-	Jurby	22	TTC	H	Supy p p 2nd TAF		AS/TTC/900/57
29/4/57	P	HQ 11 Group (Unit) Hillingdon		FC	H	Ground Combat Training	Fg Off-Flt Lt	AS/TTC/1171/57
13/1-12/2/58	A	Regt Depot Catterick		TTC	H	Familiarisation course F19 L40/70		AS/FC/1055/57
10-28/3/58	A	Hillingdon		FC	H	Detached to attend 143 Unit Instructors cse		AS/FC/575/58
15/4/58	P	Wattisham		FC	H	J S C W		FC/637/58
21/6/58	P	MISC1389A Christmas Island (Grapple)		HC	O	Decontamination Flight		AS/FC/1859/58
16/2/59	-	MISC1389 Christmas Island (On change of cmd)		TC	O	Decontamination & Radio Active Handling Flight	Flt Lt	AS/HC/505/59
10/4/59	P	Air Ministry Unit		H	H	Supy deplaned 15/4 36 dys lve 1 dy Whitsun 2 dys 7/duty at Aldermaston	Flt Lt	AS/TC/404/59
16/4/59	P	16 Maintenance Unit Stafford		MC	H	Ground Combat Training to report 25/5/59	Flt Lt	AS/AM/545/59
13-18/12/59	D	Stafford		MC	H	319 Senior Offrs cse Staff College (CD)		AS/MC/1223/59

NAME

MOVEMENTS (CONTINUED OVERLEAF)

Sunningdale Park

PERSONAL NUMBER

1498

CHRISTIAN NAME(S) [REDACTED]

PERSONAL NUMBER [REDACTED]

P = POSTING
A = ATTACHMENT

(4) MOVEMENTS (CONT'D.)

H = HOME COMMAND
O = OVERSEAS COMMAND

DATE OF EFFECT	P/A	UNIT	GRP.	CMD.	H/O	DUTIES	RANK OF POST	AUTHORITY
24/2-16/3/60	A	RAF-Regiment-Depot-Catterick				Cancelled		
9/11-21/12/60	A	RAF Regiment Depot Catterick		TTC	H	No-43-Para-Offrs-cse-(RAF-Regt-Offrs)-		MC/5/60 12/60
24/4/61	P	HQ No 22 Group		TTC	H	No R10 RAF Regt Senior Offrs cse		AS/TC/1046/60
13/11-8/12/61	A	Catterick		TTC	H	Trng 1a (badges of rank of W/C to be worn)		AS/MC/336/61
15/1/62	-	HQ No 22 Group		TTC	H	Liaison Offr training film		AS/TTC/2241/61
					H	Supy for duty with Vixen B to attend cse		AS/TTC/2389/61
						Bicester 15-19/1/62		
21/2-30/6/62	A	Air Ministry Unit		TTC	H	Duty with RAF/AWRE		AS/TTC/2391/61
21/5-25/5/62	A	BCAS Wittering		BC	H	No 84 BCAS Staff Offrs cse		AS/TTC/890/62 561/62
30/5/62	A	Catterick		TTC	H	Supy		AS/TTC/981/62
20/8/62	P	Catterick		TTC	H	Special Safety Trng Officer		AS/TTC/1433/62
23/3/64	-	Catterick		TC	H	Spec Safety Trng Off - on change of Cmnd		AS/TTC/510/64
26/10/64	P	D N B & C School		TC	H	Projects Officer		AS/TC/1344/64

Vixen B. MSF. July-July 1960
 Sept-June 1961
 Sept-Nov 1961
 Feb-May 1963

FOLD HERE

FOLD HERE

PERSONAL DETAILS PGO Ref No: G08607

(17) PERSONAL
FILE No D 106110/51 OP502134/Pt I

(5) FATHER'S	NAME ADDRESS	(12) EDUCATION (SCHOOLS ECT.)	Bournemouth Secondary Sch.	(18) PREVIOUS SERVICE COUNTING TOWARDS RETIREMENT ON RETIRED PAY
(6) NEXT OF KIN	NAME ADDRESS	(13) DEGREES/ DIPLOMAS		UNTIL..... YEARS. DAYS.
(7) ALSO TO BE NOTIFIED	RELATIONSHIP	(14) LANGUAGES	URDU AND GUJARATI	AIRMAN SERVICE.....
(8) MARRIAGE	NAME OF WIFE	(15) (a) CIVILIAN OCCUPATION	(a) ACCOUNTS AND BOOK-KEEPING	WARRANT OFFICER SERVICE.....
	NATIONALITY PRIOR TO:	(b) EMPLOYER'S NAME	(b) BOWMAKER LTD. INDUSTRIAL	COMMISSIONED SERVICE.....
	DATE OF MARRIAGE	(c) PERIOD OF EMPLOYMENT	(c) 1937-1939 BANNERS	TOTAL OF WHICH YEARS DAYS COUNT TOWARDS RETIRED PAY
			(a) CHIEF ACCOUNTANT AND MANAGER	DATE OF RETIREMENT 21.8.56 76
			(b) R.C. JOHNSON AND SONS BUILDING	"38 1/2 YEAR POINT" 11.11.63
			(c) 1946 CONTRACTORS	(19) LATEST MEDICAL CATEGORY
			(a).....	DATE.....
			(b).....	CATEGORY.....
			(c).....	NEXT MED. BD.
(9) NATIONAL IDENTITY No.	(10) NATIONAL INSUR. No.			(20) OFFICER'S PERM. HOME ADDRESS :-
	LW /162661 / C			CANGHORA DARTMOUTH
SENT TO C.N.R.O.				STURGEON GENERAL

(11) COURSES OF INSTRUCTION

DECORATIONS, AWARDS

(21) SYMBOLS AWARDED

COURSE PLACE AND DATE

RESULT AUTHORITY

M. IN D. ETC. (16) DECORATION, ETC. AUTHORITY

SYMBOL DATE AUTHORITY

12 WEAPON TRG AND FIELD CRAFT REGT DEPOT CATTERICK 12-12-51 - 26.1.52.
ABC 82 Unit Instructors' Cse @ Jnt Sch of Chem Warfare from 6/6 - 24/6/55
B1 Off LAA Com Cse @ Gunnery Sch Watchet from 11/1 - 29/2/56
F19 L40/70 Familiarisation Cse Catterick 15/1-12/ 2/58
NBC 143 Unit Instructors cse Joint Sch Chem Warfare 10-28/3/58
No 10 RAF Regt Senior Oftrs cse Catterick 10/11-21/12/60
Special Safety Off Instruction Cses @ RAF Regt Depot Catterick September 1962

93% A-1. F 292
79.5% A2 F 292
Very Good
87.4% A1 Pass F292
85% A1 F 292
86% A1 F 292
Distinction
Pass B1
69% (Credit) F 292
A1 (Dist) F292

o Ao
ys

(22) EXAMINATIONS PASSED

EXAMINATION	DATE	AUTHORITY
B. PARTIAL	MARCH. 52	N. 495/52
"B" Part (AS)	March 1953	N495/53
"B" Par (AS)	Sept 1953	N948/53
"B" Par (AS)	Feb 1954	N423/54
"C" (AS)	Feb 1955	N 378/55

NAME

MOVEMENTS (CONTINUED OVERLEAF)

Sunningdale Park

PERSONAL NUMBER

1498

SURNAME **TURNER**

CHRISTIAN NAME(S) **WILLIAM FREDERICK**

PERSONAL NUMBER **502134**

P = POSTING

(4) **MOVEMENTS (CONT'D.)**

H = HOME COMMAND
O = OVERSEAS COMMAND

MINISTRY OF DEFENCE

AIR MINISTRY

R.A.F. OFFICERS RECORD OF SERVICE

A.M. FORM 1406

(R.A.F. OFFICERS APPOINTMENTS AND RECORD OFFICE)

CONFIDENTIAL

SURNAME

CHRISTIAN NAME

PERSONAL NUMBER **502134**

DATE OF BIRTH (PER ~~PROVIDED~~ / ATTESTATION)

PLACE **SWINDON, WILTS**

RELIGION **C. of E.**

(1951) Wk. 2528-1-13 22/4 10/51 T.S. 839

(1) SERVICE IN H.M. FORCES PRIOR TO COMMISSIONING IN R.A.F.			(2) DATE AND TYPE OF COMMISSION & SUBSTANTIVE PROMOTIONS			(3) NON-SUBSTANTIVE PROMOTIONS		
RANK	DATE	AUTHORITY	RANK	DATE	LONDON GAZETTE	RANK	DATE	AUTHORITY
HAMPSHIRE REGT.	1939-1942	INCL. 11A.	SHORT SERVICE COMM. FC/OFF.	26.11.51	25.12.51	ACTG / FC / LT	28.1.52	DGP11/TTC/3154/52
COT. OFF. TRG. SCH. BANGALORE	30.5-11.12.42	ATTOG670/57	RAF REGT. BCh. RAF			REINQ ACTG	17.9.52	DGP11/SDR/700/52
EMERG COMM 2ND. LIENT. INDIAN ARMY (GURKHA RIFLES)	12.12.42	OP502134/I	6 yrs ACTIVE.			FC/LT		
W.S. LIENT.	12.6.43		4 yrs RESERVE			Actg Sgt	1/5/61	AS/MC/336/61
17CTG CAPT.	19.2.43		SENIORITY 4.3.50			Sqn Ldr		
TEMP. CAPT.	19.5.43		Perm Comm Fg Off	1/10/52	28/4/53			
ACTG MAJOR	1.8.44		RAF Regt Boh RAF					
TEMP MAJOR AND W.S. CAPT.	1.11.44		Flt Lt	27/5/54	15/6/54			
RELEASED (CLASS "A")	25.5.46		Sqn Ldr	1/7/61	4/7/61			
TERMINAL LEAVE UNTIL	4.9.46		Placed on Retired List on	23/6/65	6/7/65			
HON RANK OF MAJOR			account of medical unfitness for air force service					

DISCEASED

Officer Dead 8.10.70
Notification - R.A.F.B.F.

LOOSE MINUTE

D/DD Med Org(RAF)/19/23


9 Jan 84

DRPS (INM Alverstoke)
✓ SFS (AWRE Aldermaston)


  DECEASED

References.

- A. SFS/A/26 dated 20 Apr 83
- B. O/M3/53449 dated 30 Dec 83

1.  death in relation to his service on Christmas Island is the subject of an appeal by his widow to the Pensions Appeal Tribunal. In the course of this appeal an Army Form A21 was discovered in the Form Med 4 (Service medical record) which provides additional information at variance with previously known records (Reference A).

2. A copy of the correspondence (Reference B) is enclosed for your information; I would appreciate your comments in interpretation of this form and its presence in the medical record.


Wg Cdr
MA2a(RAF)
FV 713 5939 LN

Encl.
O/M3/53449 dated 30 Dec 83



Department of Health and Social Security
North Fylde Central Office (War Pensions)
Norcross Blackpool FY5 3TA
Telephone 0253 (Clevellys) 856123

Ministry of Defence
MA2a (RAF)
First Avenue House
High Holborn
LONDON WC1V 6HE

Your reference
D/DD MED ORE(RAF)/19/23
Our reference
O/M3/53449
Date

30th December 1983

Dear Sir

[REDACTED] - DECEASED

Thank you for your letter of 3 August 1983.

[REDACTED] has appealed against the Department's decision to reject her claim for a war widow's pension and on examination of the service medical records we note:-

- a. Army Form A21 - Record of Exposure to Radio Activity - showing Dosimeter readings from December 1957 to April 1960; a copy is enclosed.
- b. On 16 October 1958 (whilst on Christmas Island) [REDACTED] received treatment for a cut hand - broken glass of pipette containing mildly radio-active material; and
- c. When admitted to RAF Hospital, Uxbridge on 7 March 1965 (from RAF Station, Winterbourne Gurney) he stated that he was working on radiation and war gases.

In view of this, any comments you may have regarding the late [REDACTED] exposure to radiation would be appreciated please.

Yours faithfully

[REDACTED]
for Head of War Pensions

NB For Winterbourne Gurney read Winterbourne Gurney

Enclosure 32 - Fried 4

47 Army Form A.21

PERSONNEL RECORD OF EXPOSURE TO RADIO ACTIVITY

Unit HQ No 11 Group (Unit)
 Station RAF Hillingdon 1/8/1955

Surname [Redacted]
 Christian or Fore Name(s) [Redacted]
 Rank or Grade ~~Private~~ Sergeant
 Army or Clock No [Redacted]

Routine of Medical Examinations						Periods of Suspension due to Excess Dosage			
No.	Date	Officer's Initials	No.	Date	Officer's Initials	From	To	From	To
1	10.4.58	[Signature]	4						
2			5						
3			6						

Weekly Totals - Dosimeter Readings (from Col. 5) - Army Form A20

Week Commencing	Reading	Initials A.B.C. Officer	Week Commencing	Reading	Initials A.B.C. Officer	Week Commencing	Reading	Initials A.B.C. Officer
16.12.57	.004 r	[Signature]	6.4.59	.05 r	[Signature]			
3.3.58	.03 r	[Signature]	June 22	.48 mr	[Signature]			
2.5.58	.02 r	[Signature]	October 59	2 mr	[Signature]			
9.5.58	.01 r	[Signature]	November 59	2 mr	[Signature]			
Grapple 2	1.52 r	[Signature]	December 59	1 mr	[Signature]			
Oct 58	.12 r	[Signature]	Jan 60	1 mr	[Signature]			
Grapple 2	.51 r	[Signature]	April 60	1 mr	[Signature]			

HQ No 11 Group. RAF Hillingdon. (29 April 1957)
 to (28 March 1958)

Pre-Grapple 2 posting: - 0.064 r.

Grapple 2 1.52 r - Unexplained

Oct '58 .12 r

Grapple 2 .51 r.

6.4.59 .05 r.

} These exposures are given in the "Blue Book".

Unexplained

Post Grapple: - June 22. (1959?) 48 mr.

October '59 2 mr

November '59 2 mr

December '59 1 mr

January '60 1 mr

April '60 1 mr

} ? At 16 MU Stafford Ground Combat Training.

A/BLOOD

RECORD OF BLOOD EXAMINATION

(For Medical Officer's use only)

No.	Date	Hb	(Rbc)	PCV	Wbc	POLYS	Lymphs	Mons	EOS	BAS	Abnormal Cells
417	4.3.58	85%			10,400	55%	35%	2%	6%	2%	

Examination Before posting to Christmas Island.

PROCUREMENT EXECUTIVE, MINISTRY OF DEFENCE

ATOMIC WEAPONS RESEARCH ESTABLISHMENT

HEALTH AND SAFETY: IN CONFIDENCE

Building A85

Aldermaston, Reading, RG7 4PR

Telephone Tadley 4111 (STD 073 56 4111)

Telex 848104/5

Ext: 6111

Our Ref: SFS/A/26

Your Ref:


Date: 20 April 1983


DHSS

North Fylde Central Offices

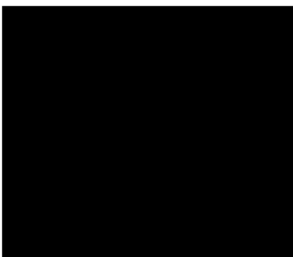
Ex-)RAF Regt - Deceased

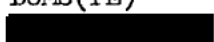
Ref: O/M3/53449 of 8.4.83.

The information available to AWRE is that  radiation exposure at Christmas Island in 1958-59 was ZERO (being either below the minimal recordable level (\times 20 millirontgens) for any dosimeters in use or NIL) from UK nuclear weapons tests.

 was in the RAF Regiment and his duties would not have involved him in exposures to radiation at levels higher than he would have received in UK had he been there from June 1958 to June 1959. Officers of the RAF Regt were in the support elements at Christmas Island. Had he been required to enter any area where there was a radiation hazard, he would have been issued with and worn a film badge dosimeter and protective clothing, have received appropriate instruction on hazards and safety precautions and carried out his duties under strictly applied stringent radiological protection arrangements.

DHR/RAF, as the representative of his "employer" the RAF, can supply details of his radiation exposure, if any, in RAF service.


cc Hd DRPS
S10(Air)
DS18(CHS) - Claims
Hd DSc3
DCMS(PE)

 (2)





Listed. RIF Regiment Ft/Lt.

Grapple Z. Null. Planning.

[Gp. Capt. Rexford Welch cannot help
as he was not present at Grapple Z.]

P.S.



RIF Ft/Lt	Grapple Z	458	120 men	HP
"	"	"	RM 520	" HP

" " "



Our reference: 0/M3/53449.

8. 4. 1983

Your reference: —

To: S.F.S. Safety Records
Room 9, Building A85,
Atomic Weapon Research Establishment
ALDERMASTON (AURE)
Reading RG7. 4PR.

Surname _____
 (In BLOCK letters)

Other Names _____

Official Number _____
 (In cases of Naval Officers enter
 "RN" or "RNVR")

*Rank/Rating _____

Squadron - Leader.

Last Ship or Unit _____

R.A.F.

Date of *Death in service/termination of service _____

22.6.65

Died :-

8.10.70

Reason for termination of service _____

Invalidated

(eg invalidated, released Class A, B or C)

_____ served on Christmas Island from 21.6.58 to 15.4.59 & his widow claims that his death was due to radiation from the nuclear tests on Christmas Island. It would be appreciated therefore if you could supply the following information

- A Can it be confirmed that this ex-officer was directly involved in the tests cited or was in the vicinity at the time or after the tests?
- B If so, what were his duties?
- C Where the areas in which he served subject to any radiation & if so, how much?
- D Was _____ exposed to any radiation & if so, how much?
- E Was he wearing a film badge & if so, what readings were recorded?
- F What instructions about safety precautions & the wearing of a film badge were issued to him?

Group NSC. RM 116. Ext 397.

~~REDACTED~~

for Head of War Pensions

*Delete as necessary