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02072181769



Classification	UNCLASSIFIED
Descriptor	
Covering	

**F Sigs 927**  
(int.9/92)

# Facsimile Transmission Cover Sheet

Transmission Details		Document Details
Serial Number:	Date and time of transmission: 17/09/01	Reference: D/ACSA(N)/15/8/3
From: [REDACTED]	Fax Number: 02072181769	Subject: DDT
[REDACTED]	Fax Number:	
		Total Number of pages including this cover sheet   1+

Authorising Officer	Transmit Operators
Rank, Name and Appointment:	Rank/grade and Name:
Signature: [REDACTED]	Signature:

Message/Remarks:

[REDACTED]  
We spoke about DDT and here are the questions the MP has posed. We have info on most of the points except:

for Q7 – guidance to staff on CI at the time – have you got anything?

Re Q2 do we think we sprayed fom 57 thro to 64? We will work on that assumption

[REDACTED]

Covering	
Descriptor	
Classification	UNCLASSIFIED

RECEIVED  
10 SEP 2001  
MC



[Redacted]

USDOB  
 PARLIAMENTARY BRANCH  
 ON: 11/9/01  
 MINISTER REPLYING: US S  
 KEYWORD(S): Nuclear Test  
 LEAD BRANCH: AC5A(2)  
 COPIED TO:  
 RELATED CASE: 36141  
 CLERK  
 5th S

MW/JM18

Dear [Redacted]

I refer to your letter of 23<sup>rd</sup> ult., and note what you say. I have spoken further to my constituent regarding this matter. I wonder if it is possible, from the records of that period, to give answers to the following questions:-

1. How often, on a daily basis, was Christmas Island sprayed with DDT from the light aircraft used for the purpose. ✓
2. For how many years was the Island sprayed with DDT by order of our Government. ✓
3. Was our Government or the people responsible for the use of DDT on the Island aware of any reports/publications/books relating to the danger to humans from the sustained use and exposure to DDT.
4. What was the strength/amount of DDT in the solution used. ✓
5. Was there any other organo-phosphate based chemical/s used to spray the Island.
6. Were there any other chemicals "of any makeup" used to spray the Island.
7. Was there any guidance information relating to the dangers of exposure to DDT. If there was, how was it brought to the attention of service personnel on the Island, i.e. standing orders, notice bulletins, handouts to personnel etc. ||
8. If the MOD cannot give answers then who can.

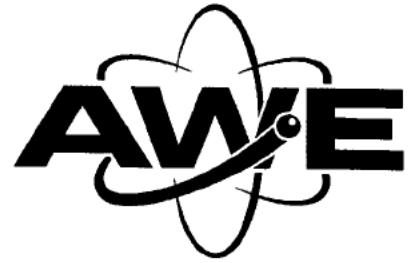
I would be very grateful for any information you can give on this matter.

[Redacted]

TIME RECEIVED:  
DATE:

[Redacted]

**PROTECTIVE MARKING  
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**FACSIMILE LEADER SHEET**

From: [Redacted] Bldg No. [Redacted] AWE,  
To: [Redacted] Fax No. [Redacted] [Redacted]

TRANSMISSION COMPRISES 12 PAGE(S), INCLUDING THIS PAGE

Message :

[Redacted] The first [Redacted] report is for appeal case I  
sent yesterday. The second is for the latest appeal case.  
Notice the similarities!

[Redacted]

Signed: [Redacted]

Ext: 4494

ORIGINATOR

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[Redacted]



## Statement in support of the Application of [REDACTED]

1 [REDACTED] was present on Christmas Island for several months in 1964 during the clean up and closing-down operations. He worked as an electrical fitter whose primary responsibility was servicing batteries from vehicles and aircraft. The vehicles (including tractors and cranes) were being driven all over the island as part of the clean up and closing down operations. [REDACTED] work base was on the airfield near the hangars (see attached statement of [REDACTED]).

2 The LETTER FROM ALDERMASTON AWE dated 31.7.00 at pp.21-22 of Statement of Case indicates that [REDACTED] was not issued with a dosimeter and no dose reading exists for him. *exp. data*

3.1 The LETTER FROM ALDERMASTON AWE dated 31.7.00 states that "all the detonations at Kiritimati [Christmas Island] were high air burst; none were low enough to cause significant local fallout." In fact there were two balloon detonations at the southern tip of the island on 22 August, 1958 and 23 September, 1958. *50.45 Hrbt  
air burst 5-  
radioactive*

*no widespread contamination of island*  
3.2 The LETTER FROM ALDERMASTON AWE dated 31.7.00 states that there was "a small area of detectable fission product contamination on the end of the runway. A little more contamination may have separated while the aircraft was moving to the parking pad." following the cloud penetration activities by aircraft following both Operation GRAPPLE and Operation DOMINIC. *fission product*

3.3 The LETTER FROM ALDERMASTON AWE dated 31.7.0 states that decontamination work was carried out by AWRE in 1959.

3.4 The LETTER FROM ALDERMASTON AWE dated 31.7.0 refers to "A report by [sic] dated 29<sup>th</sup> May 1963, after the conclusion of Operation DOMINIC stated that no radiation hazard exists in any of the areas surveyed."

3.5 However a document dated 13 July 1964 (attached) supplied by the Parliamentary Under-Secretary of State for Defence to a fellow Member of Parliament in relation to another veteran's query indicates that decontamination was an ongoing concern throughout the period of [REDACTED]' presence on Christmas Island.

3.6 The PAT awarded a pension to [REDACTED] (M1/871518) for cataracts. The Letter dated 25.7.90 from the AWE in his Statement of Case (attached) indicates that there was measurable fallout on Christmas Island during Operation Grapple although the AWE dismisses it as negligible.

3.7 The memo titled Rainfall at Christmas Island met station during and after nuclear tests that was submitted along with the Letter in 3.6 above indicates that there was rainfall on Christmas Island after Grapple Y - a 1 megaton airburst over the ocean (April 28 1958), Grapple Z/Pennant 2 - approximately 1 megaton balloon burst over land (22 August 1958); and Grapple Z/Flagpole 1 - a 1 megaton burst over ocean (2 September 1958).

3.8 In the case of [REDACTED] (ENT 2682/97) the PAT for England and Wales stated in its Reserved Decision of 28 February 2000:

"We then went on to consider whether [REDACTED] was exposed to more radiation at Christmas Island than 'background' radiation to which the general public is and was exposed.

We accept that his posting was 43kms from the test site. However, we note that he was the Chief Signals man and had ample opportunity to travel round the Island. Furthermore, we accepted [REDACTED] evidence that her husband had told her about bicycling round the Island and his diet of coconut milk. We consider that [REDACTED] did not always remain at the base camp and could have and did venture much closer to the test site. Furthermore, we took particular note that the readings of radiation levels at P.33 of the Safety division Technical Note No 16/52 show that it was extrapolated, that on 22 August the day of the first test, there was a level of radiation at the base camp where [REDACTED] was stationed, above the recommended limit for continuous occupation for members of the public.

We find, bearing in mind the matter set out above, that [REDACTED] was exposed to radiation in excess of that to which he would have encountered if he had not served in the Royal Navy and Christmas Island.

In view of our 2 findings [the first being that the conditions from which [REDACTED] died could have been caused by radiation] we accept that there is a reasonable doubt that the conditions were caused by radiation to which [REDACTED] was exposed on Christmas Island. Hence we find the conditions are attributable to service." (emphasis in original)

3.9 There is extensive film evidence of the 'rainout' which veterans recall after the April 28, 1958 detonation. The film MOMENT OF TRUTH has good footage of a veteran named [REDACTED] recalling the heavy rains after April 28, 1958 detonation. This is corroborated by [REDACTED] who speaks of scientists' panic when they realised rain was approaching the camp. There is archival footage of heavy rain at Port Camp in 1958. There is followed by a discussion by Nobel Prize Winner [REDACTED] of implications of rain/inhalation/ingestion and archival footage of men swimming and fishing at Christmas Island. The Dispatches film TRUTH OF CHRISTMAS ISLAND also has a segment on the rainout after the April 28, 1958 detonation with several veterans recalling the rain and the panic among the scientists. More footage of rain/flooding at the camp. The film WHEN THE DUST SETTLES also has a segment on this rainout.

3.10 The Dispatches film TRUTH OF CHRISTMAS ISLAND has a segment on the detonation of the April 28, 1958 bomb which is thought by many present to have been detonated well below the proposed 8000', thereby making it more 'dirty' especially in local fallout. Includes eye witness from pilot [REDACTED] and discussion by physicists [REDACTED].

3.11 The Dispatches film TRUTH OF CHRISTMAS ISLAND also has an interview with [REDACTED] telling the story of the radioactive crayfish in the wardroom on Christmas Island - at a party a Geiger counter was brought into the dining room and the crayfish that had been caught for the party activated it. A variation of this story is told by a veteran [REDACTED] in the film WHEN THE DUST SETTLES. [REDACTED] also tells this story in GHOSTS OF CHRISTMAS PAST.

3.12 The Dispatches film TRUTH OF CHRISTMAS ISLAND has clear footage of the balloon bursts showing the ground level activity that would lead to contamination of Ground Zero at southeastern tip of Christmas Island; eminent health physicist [REDACTED] is quoted as saying one particle of radioactive material could cause damage 50 years later if inhaled, ingested, absorbed etc. There is reference to the flourishing 'fish and chip' shop set up by the men at Christmas Island during Grapple in WHEN THE DUST SETTLES [REDACTED] and also in the Dispatches film [REDACTED].

4.1 The MEDICAL APPENDIX CANCER OF THE LUNG states at paragraph 30:

"For radiation protection purposes it is, therefore, accepted that there is no threshold level below which no carcinogenic effect is produced, and the risk of a cancer developing is extrapolated on a dose-proportional basis from high to low doses and dose rates."

4.2 The same APPENDIX notes at paragraph 37 that the type of cancer from which [REDACTED] suffers, adenocarcinoma of the lung, is least closely linked to smoking.

4.3 At paragraph 40 the APPENDIX states that "Lung cancer is strongly linked to exposure to ionising radiation."

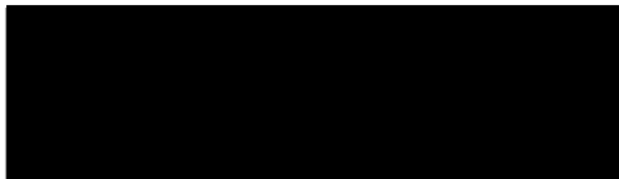
4.4 Recently [REDACTED], Director of the National Radiological Protection Board, Chairman of the International Commission on Radiation Protection and UK Representative on the UN Scientific Committee on the Effects of Atomic Radiation (UNSCEAR) wrote

"In summary, the ICRP judges that the weight of evidence at present falls in favour of assuming that radiation events are potentially disruptive from the lowest doses. While apoptosis, cellular surveillance, immune and adaptive responses are all real, they are most likely to modify the shape of the dose-response curve rather than proving a threshold."

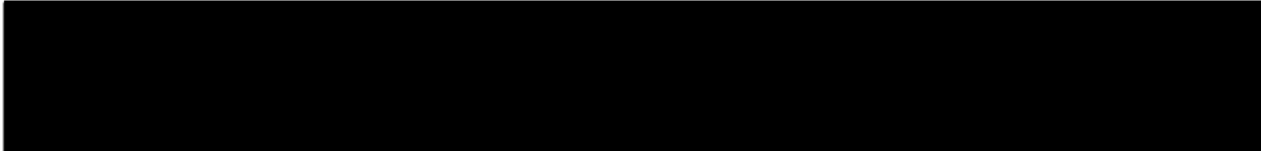
(*Medicine Conflict and Survival* 2000 vol 16:4 pp416-7)



It is therefore submitted that it is possible that [REDACTED] adenocarcinoma of the lung was induced by his participation in the clean up/close down operations on Christmas Island in 1964.



March 26, 2001



1 It is accepted that [REDACTED] served as a catering assistant in the RAF at Christmas Island for the period 24.2.58 to 29.11.58.

2.1 The REPORT BY ATOMIC WEAPONS ESTABLISHMENT dated 25.7.00 at p 13-14 of the Statement of Case states that [REDACTED] was not issued with personal film-badge dosimeters because his duties were not expected to give him the potential for exposure to measurable levels of ionising radiation. The AWE contends that [REDACTED] was at least 35 km from the detonation at the time of the 4 explosions.

2.2 The same REPORT acknowledges (p.15) that "Some induced radioactivity was detected in the sea immediately below the points of the megaton detonations, but this was dispersed and decayed to negligible levels within a few hours."

2.3 The REPORT discusses the theory of fallout in relation to high air bursts but does not discuss the known hazards of low level detonations such as the two balloon detonations for which [REDACTED] was present on August 22, 1958 and 23 September 1958.

2.4 The REPORT cites AWE Report SDTN 16/93 "Environmental Monitoring at Christmas Island 1957-58" to support its contention that the hazards to servicemen such as [REDACTED] on Christmas Island was negligible. In the case of [REDACTED] (ENT 2682/97) the PAT for England and Wales stated in its Reserved Decision of 28 February 2000:

"We then went on to consider whether [REDACTED] was exposed to more radiation at Christmas Island than 'background' radiation to which the general public is and was exposed.

We accept that his posting was 43kms from the test site. However, we note that he was the Chief Signals man and had ample opportunity to travel round the Island. Furthermore, we accepted [REDACTED] evidence that her husband had told her about bicycling round the Island and his diet of coconut milk. We consider that [REDACTED] did not always remain at the base camp and could have and did venture much closer to the test site. Furthermore, we took particular note that the readings of radiation levels at P.33 of the Safety division Technical Note No 16/52 show that it was extrapolated, that on 22 August the day of the first test, there was a level of



12

radiation at the base camp where [REDACTED] was stationed, above the recommended limit for continuous occupation for members of the public.

We find, bearing in mind the matter set out above, that [REDACTED] was exposed to radiation in excess of that to which he would have encountered if he had not served in the Royal Navy and Christmas Island.

In view of our 2 findings [ the first being that the conditions from which [REDACTED] died could have been caused by radiation] we accept that there is a reasonable doubt that the conditions were caused by radiation to which [REDACTED] was exposed on Christmas Island. Hence we find the conditions are attributable to service." (emphasis in original)

2.5 [REDACTED] stated in his letter dated 24.2.00 at pp9-10 of the Statement of Case that "I witnessed 4 explosion in all 1 of 1.5 megaton. I also helped in clean up operation of dead birds and fish that were floating in water. My only protection was a white boiler suit and a pair of dark glasses."

3.1 There is extensive film evidence of the 'rainout' which veterans recall after the April 28, 1958 detonation. The film MOMENT OF TRUTH has good footage of a veteran named [REDACTED] recalling the heavy rains after April 28, 1958 detonation. This is corroborated by [REDACTED] who speaks of scientists' panic when they realised rain was approaching the camp. There is archival footage of heavy rain at Port Camp in 1958. There is followed by a discussion by Nobel Prize Winner [REDACTED] of implications of rain/inhalation/ingestion and archival footage of men swimming and fishing at Christmas Island. The Dispatches film TRUTH OF CHRISTMAS ISLAND also has a segment on the rainout after the April 28, 1958 detonation with several veterans recalling the rain and the panic among the scientists. More footage of rain/flooding at the camp. The film WHEN THE DUST SETTLES also has a segment on this rainout.

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3.3 The Dispatches film TRUTH OF CHRISTMAS ISLAND also has an interview with [REDACTED] telling the story of the radioactive crayfish in the wardroom on Christmas Island - at a party a Geiger counter was brought into the dining room and the crayfish that had been caught for the party activated it. A variation of this story is told by a veteran [REDACTED] in the film WHEN THE DUST SETTLES. [REDACTED] also tells this story in GHOSTS OF CHRISTMAS PAST.

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71  
'fish and chip' shop set up by the men at Christmas Island during Grapple in WHEN THE DUST SETTLES [REDACTED] and also in the Dispatches film [REDACTED].

4.1 The WAR PENSIONS AGENCY LETTER T [REDACTED] - REASONS FOR DECISION dated 30.8.00 at pp.23-4 of Statement of Case states "... the report from AWE shows that your husband was not exposed to a measurable amount of radiation, and therefore was not exposed to any health risk from ionising radiation."

4.2 The MEDICAL APPENDIX CANCER OF THE LARYNX states in para 19 re Ionising Radiation:

"For radiation protection purposes it is, therefore, accepted that there is no threshold level below which no carcinogenic effect is produced, and the risk of a cancer developing is extrapolated on a dose-proportional basis from high to low doses and dose rates."

4.3 Recent [REDACTED], Director of the National Radiological Protection Board, Chairman of the International Commission on Radiation Protection and UK Representative on the UN Scientific Committee on the Effects of Atomic Radiation (UNSCEAR) wrote

"In summary, the ICRP judges that the weight of evidence at present falls in favour of assuming that radiation events are potentially disruptive from the lowest doses. While apoptosis, cellular surveillance, immune and adaptive responses are all real, they are most likely to modify the shape of the dose-response curve rather than proving a threshold."

( *Medicine Conflict and Survival* 2000 vol16:4 pp416-7)

4.4 In the case of [REDACTED] (P1/0785) the PAT for England and Wales held in the Decision in dated 16 November 1994 *inter alia*

"The Tribunal gave weight to the following:

- a) In spite of the Department's assertion that a fundamental basis of the test was that weather conditions should not produce fall out on the island, their own statement now accepted showers and the possibility could not be excluded that some of these might have been heavy.
- b) The department while denying possible radiation consequences, did not accept that fishing and swimming in the lagoon in the aftermath of the test had in fact been permitted.
- c) The Department's own recent admission that in at least three cases men issued with dosimeters had suffered radiation, and the accepted fact that [REDACTED], although present at the test, had not been issued with any dosimeter.
- d) The straightforward and reliable presentation of the appellant and his assertion that he had not received radiation treatment as suggested by the department.
- e) The line of the High court judgement in the Titmus case (another Christmas Island radiation case) that radiation knowledge is ongoing: the safety parameters of thirty years may no longer be adequate guide.

Against this background the Tribunal found that the appellant had raised a reasonable doubt in his favour, and his appeal is allowed."

5.1 The NATO document included in the Statement of Case at pp.25J states at 1-1 b (2):

“Low Level Radiation (LLR) exposure produces a risk to soldiers of long term health consequences. The doses received from these exposures are higher than those routinely received by health physics workers and the general public and are in the range from background radiation to 70cGy. The primary consequences of exposure may be induction of cancer in the longer term post exposure....”

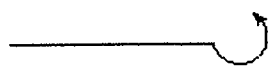
5.2 The document Minutes of a Meeting held at A.W.R.E. on 15 July 1958 to discuss Radiological Safety Precautions at Christmas Island at p. 25c of the Statement of Case report the Chairman [REDACTED] as stating that the matter for discussion “was whether or not Service personnel at Christmas Island should be subjected to blood examinations. This matter had been under consideration both by the Task Force and A.W.R.E. for some time past but it was now a more pressing problem than heretofore because the tests of balloon supported nuclear devices would necessitate a number of people entering and rehabilitating the contaminated area after the first burst.” The A.W.R.E. was urging that blood counts should be taken for medico-legal reasons; [REDACTED] stated that “He considered that it would prejudice the case if no blood count was taken and a person became ill later.”

5.3 The Secretary of the US Department of Veterans Affairs has held since 1998 that “based on all evidence currently available to him, prostate cancer **and any other cancers may be induced by ionizing radiation**” (emphasis added) and has relieved US veterans of the “burden of having to submit evidence that a veteran’s prostate cancer or any other cancer may have been induced by ionizing radiation.”

[REDACTED] was a life long non-smoker, only drank an occasional glass of wine and kept physically fit. His parents have lived to their 90s. (P 25 of Statement of Case). His consultant oncologist stated that he had never seen such an aggressive and invasive cancer in a non-smoker in his thirty five years of professional life. It is therefore submitted that a reasonable doubt has been raised that [REDACTED] carcinoma of the larynx could well have been induced by his participation in the nuclear and atomic tests of 1958 and his presence on Christmas Island for 9 months.

[REDACTED]

March 19, 2001



1: *Fed Regist* 1998 Sep 24;63(185):50993-5

**Claims based on exposure to ionizing radiation (prostate cancer and any other cancer)--VA. Final rule.**

This document amends the Department of Veterans Affairs (VA) adjudication regulations concerning compensation for diseases claimed to be the result of exposure to ionizing radiation. This amendment implements a decision by the Secretary of Veterans Affairs that, based on all evidence currently available to him, prostate cancer and any other cancers may be induced by ionizing radiation. The intended effect of this action is to relieve veterans, or their survivors, seeking benefits under the provisions of the Veterans' Dioxin and Radiation Exposure Compensation Standards Act of the burden of having to submit evidence that a veteran's prostate cancer or any other cancer may have been induced by ionizing radiation.

PMID: 10185808, UI: 99064753



-25C-

Minutes of a Meeting held at A.W.R.E.  
on 15th July, 1958 to discuss  
Radiological Safety Precautions at  
Christmas Island

Task Force Grapple  
 A.W.R.E.  
 Task Force Grapple  
 R.A.P. Hospital 'Alton  
 Air Ministry  
 A.W.R.E.  
 A.W.R.E.  
 Headquarters Bomber Command  
 Admiralty  
 War Office  
 Task Force Grapple

1. The Chairman opened the meeting by outlining the matter for discussion. This was whether or not Service personnel at Christmas Island should be subjected to blood examinations. This matter had been under consideration both by the Task Force and A.W.R.E. for some time past but it was now a more pressing problem than heretofore because the tests of balloon supported nuclear devices would necessitate a number of people entering and rehabilitating the contaminated area after the first burst. He continued by saying that there were two points of view, the purely medical and the medico-legal. He had been advised that from a purely medical aspect there was little or nothing to be gained by subjecting Service personnel at Christmas Island to blood counts. A.W.R.E. on the other hand considered that from the medico-legal aspect blood counts were necessary. He concluded by saying that as A.W.R.E. insisted on blood counts for their own personnel a compromise might be acceptable. This was to arrange blood counts for those who would be working in the forward area during Grapple "Z" and for all future replacements for Christmas Island. It was clearly impossible at this stage to arrange for all Service personnel at Christmas Island during Grapple "A", a total of over 4,500, to be given blood counts.

2. Group [redacted] considered that no compromise was necessary as he thought that the proposal to give blood examinations was unsound.

3. [redacted] then asked A.W.R.E. to give their reasons for advising the Task Force Commander that a blood count should be taken.

4. [redacted] replied that he would not argue the case for single blood counts on purely medical grounds but he felt that the matter must be regarded from the medico-legal angle. He said that people with counts habitually above or below normal or those with any blood abnormality must be excluded from the possibility of radiation. For this reason it was an integral part of the medical examination given to all A.W.R.E. personnel. Furthermore, a statutory requirement under the Factories Act was shortly to become law which stated that blood counts were to be given to all civilians working under conditions in which they were exposed to radiation in the normal course of their duties. Finally, he stated that A.W.R.E. were concerned about the political repercussions which might ensue if charges of negligence, however unfounded, could be proved. He agreed that it would not be a feasible proposition to carry out blood counts on Service personnel already at Christmas Island, however, he felt that personnel working in the forward area and future replacements for Christmas Island should receive blood counts.

UNCLASSIFIED



5. [redacted] then stated that his objection was based on the grounds that he was not convinced that a blood count was of any use whatever and he suggested that if a person was examined and found to be normal before posting to Christmas Island and who later developed leukaemia, it might be difficult to refute the allegation that this was due to radiation received at Christmas Island.

[redacted] was convinced on the other hand that a blood count was of value not exposing to radiation people of poor health. He considered that it would prejudice the case if no blood count was taken and a person became ill later.

6. Task Force Commander then stated that the compromise he had proposed and which was supported by [redacted] seemed the logical one and after considerable discussion the following decisions were reached: -

(a) All personnel likely to be employed during Crapple "E" in the forward area where they might be subject to radiation hazards should be given blood counts before the commencement of the tests.

(b) The question of whether all Service replacement personnel posted to Christmas Island should be given blood counts, regardless of their duties or places of work, was to be referred to the Air Ministry for decision in consultation with the other two Services.

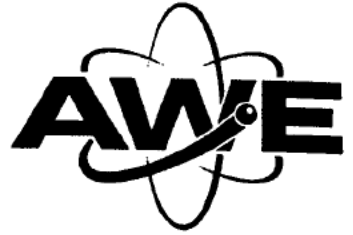


H.Q. Task Force Crapple  
17 July 1958



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DATE:

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FACSIMILE LEADER SHEET

From: [REDACTED] Bldg No. [REDACTED] AWE, Aldermaston  
Reading, Berkshire.  
RG7 4PR  
To: [REDACTED] Fax No. 020 72181796  
Tel. 0118 981 4111  
Direct Tel. 0118 9824494  
Fax. 0118 982 5796

TRANSMISSION COMPRISES 6 PAGE(S), INCLUDING THIS PAGE

Message:

[REDACTED]  
① Copy of SM for 05/01/03 re Xmas Island inhabitant  
② [REDACTED] Reply - hard copy to follow.

Signed: [REDACTED] Ext: 4494

ORIGINATORS

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Jan 05/2003



DEAD: Terri's father

Picture: ROLAND LEON

MY LOST LOVED ONES: Terri with an album of family photographs

# My island heaven was turned to hell

A WOMAN who lived through Britain's A-bomb tests on Christmas Island has revealed the hidden horror of what happened to the people afterwards.

Terri Pollard's parents, four of her brothers and a sister all died from cancers or unexplained illnesses - and she herself had to have a growth in her stomach removed.

Terri, 44, who now lives in Burnley, Lancs, believes many other families were also affected. She said: "I blame the British Government for all this misery. It turned paradise into hell with these awful weapons."

Terri hit out after reading Sunday Mirror reports of illnesses in the families of servicemen who witnessed the bomb tests in Australia and the Pacific.

She said: "Their suffering mirrors what has happened to my people. It is a disgrace the way our plight continues to be ignored."

Terri, who was just four when she witnessed the bomb tests in

1962, says she and the rest of the population were herded into open spaces when the bombs exploded.

They were told to lie on the ground with cotton wool stuffed in their ears while the countdown began. After the explosion, just a few miles off-shore, they were given a picnic and watched Disney movies as the mushroom cloud towered above their heads.

When the tests were over the population were left to fend for themselves as cancers, blood diseases, and skin complaints spread through the 300-population.

But with scarce medical facilities, many islanders were left untreated.

She said: "We led a simple life with disease virtually unknown. But after the tests everything changed. I now realise the whole island was poisoned. The fish were poisoned - and the palm trees began to grow into strange shapes."

By ALAN RIMMER

FIFTIETH AN  
CORONA  
1953  
OFFICIAL B  
SOVEREIGN  
SOVEI

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JOB #787

DATE	TIME	TO/FROM	MODE	MIN/SEC	PGS	STATUS
001	11/15 14:27	0171 218 1769	EC--S	01' 54"	006	OK

TIME RECEIVED:  
DATE:

[REDACTED]  
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**FACSIMILE LEADER SHEET**

From: [REDACTED] Bldg No. [REDACTED]  
To: [REDACTED] Fax No. 020 7218 1769

AWE Aldermaston  
Reading, Berkshire,  
RG7 3LY

Tel. 0118 981 4111  
Direct Tel. 0118 982 4494  
Fax. 0118 982 5796

TRANSMISSION COMPRISES **6** PAGE(S), INCLUDING THIS PAGE

**Message :**

[REDACTED]

*These are faxed to you as DRAFT versions so you have them ASAP. 0206 just needs to be signed as content is agreed. Hall 0207 is in draft form. I will send originals as soon as I can. Please note - for all these recent queries where no information other than the name is given by you, the reply is based on the details of the person as identified by us in the reply. If you subsequently obtain more information of identity, can you confirm that we have provided info for the right person?*

*Regards*

*3*

Signed: [REDACTED]

Ext: 4494

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[REDACTED]  
**PROTECTIVE MARKING**

AWE

JOB #647

DATE	TIME	TO/FROM	MODE	MIN/SEC	PGS	STATUS
001 10/17	14:33	0171 218 1769	EC--S	01' 01"	003	OK

TIME RECEIVED:  
DATE:

[REDACTED]

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FACSIMILE LEADER SHEET

From: [REDACTED] Bldg No. [REDACTED]  
To: [REDACTED] Fax No. 020 7218 1769

AWE Aldermaston  
Reading, Berkshire.  
RG7 3LY

Tel. 0118 981 4111  
Direct Tel. 0118 9824494  
Fax. 0118 982 5796

TRANSMISSION COMPRISES 3 PAGE(S), INCLUDING THIS PAGE

Message :

[REDACTED]

*Reply to your recent enquiry 15.10.02  
Original letter to follow.*

*There were two of that surname on record,  
one Army, one R.N. I have included The DoB & NINo.  
Service No. etc as we have it so you can confirm  
identity if needed.*

*Regards*

Signed: [REDACTED]

Ext: 9824494

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TIME RECEIVED:  
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**FACSIMILE LEADER**

From: [REDACTED]  
To: [REDACTED]

Bldg No. [REDACTED]  
Fax No. 020 7218 1769

AWE, Aldermaston  
Reading, Berkshire,  
RG7 4PR

Tel. 0118 981 4111  
Direct Tel. 0118 982 4494  
Fax. 0118 981 ~~5796~~ 5796

TRANSMISSION COMPRISES 3 PAGE(S), INCLUDING THIS PAGE

Message

[REDACTED]

Information as requested. Sorry 1 page is quite dark  
but that is the best it will do as the blue colour is quite  
strong.

Regards

[REDACTED]

Signed: [REDACTED] Ext: 4494

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[REDACTED]

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JOB #642

DATE	TIME	TO/FROM	MODE	MIN/SEC	PGS	STATUS
001	10/15 09:37	0171 218 1769	EC--S	02' 39"	001	STOP

TIME RECEIVED:  
DATE:

[REDACTED]

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FACSIMILE LEADER SHEET

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To: [REDACTED] Fax No. 020 7218 1769

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Reading, Berkshire,  
RG7 4PR  
Tel. 0118 981 4111  
Direct Tel. 0118 982 4494  
Fax. 0118 981 5796

TRANSMISSION COMPRISES 3 PAGE(S), INCLUDING THIS PAGE

Message

[REDACTED]

*Information as requested. Sorry 1 page is quite dark  
but that is the best it will do as the blue colour is quite  
strong.*

*Regards*

[REDACTED]

Signed: [REDACTED] Ext: 4494

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[REDACTED]

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JOB #643

DATE	TIME	TO/FROM	MODE	MIN/SEC	PGS	STATUS
001 10/15	09:41	0171 218 1769	EC--S	03' 31"	003	OK

TIME RECEIVED:  
DATE:

[REDACTED]

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**SIMILE LEADER SHEET**

From: [REDACTED]

Bldg No. [REDACTED]

AWE, Aldermaston  
Reading, Berkshire,  
RG7 4PR

To: [REDACTED]

Fax No. 020 7218 1769

Tel. 0118 981 4111  
Direct Tel. 0118 982 4494  
Fax. 0118 981 ~~5796~~ 5796

TRANSMISSION COMPRISES 3 PAGE(S), INCLUDING THIS PAGE

Message

[REDACTED]  
*Information as requested. Sorry 1 page is quite dark  
but that is the best it will do as the blue colour is quite  
strong.*

*Regards*

Signed: [REDACTED]

Ext: 4494

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[REDACTED]



SFS/UNB/1(P)  
1982  
Provisional Issue

UNITED KINGDOM MINISTRY OF DEFENCE  
(PROCUREMENT EXECUTIVE)  
AWRE ALDERMASTON

SFS/OEL/UNB/1(P)

Listing of Persons at UK Overseas Defence Nuclear Experimental Programmes  
UK (Royal Navy) (Provisional Issue)  
Part 1: Hurricane and Mosaic

Compiled at the direction of  
SFS/MOD(PE)AWRE

by

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confidence and may be disclosed in confidence only to persons  
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AWRE Aldermaston  
Berkshire



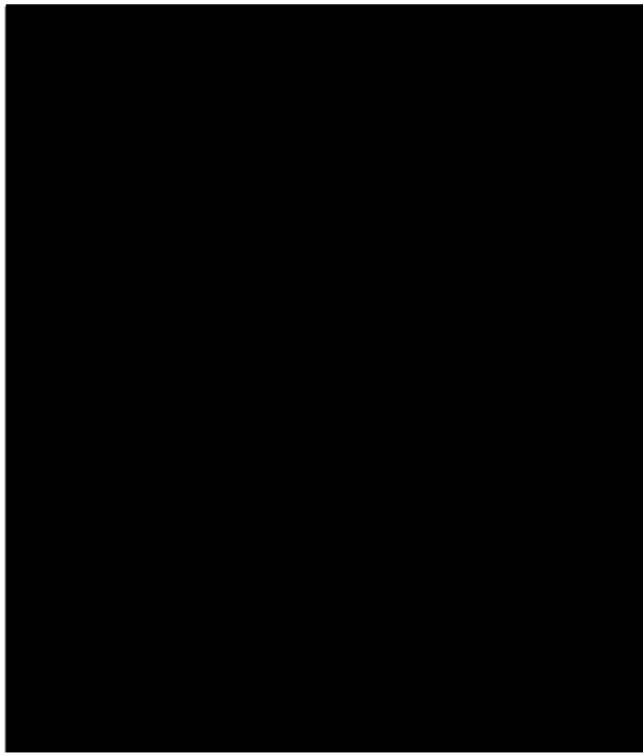
Listing of Persons at UK Overseas Defence Nuclear Experimental Programmes (BLUE BOOK S)

No.	TITLE	REFERENCE No.	DATE of Issue
1.	General Description and Statistics (Provisional Issue)	SFS / OEL / GB / 1 (P)	21/05/1982
2.	UK Civilians	SFS / OEL / UCIVB / 1 (P)	27/04/1982
3.	UK (ROYAL NAVY) Part 1 Hurricane and Mosaic	SFS / OEL / UNB / 1 (P)	11/03/1982
4.	UK (ROYAL NAVY) Part 2 Grapple and Grapple X	SFS / OEL / UNB / 1 (P)	11/03/1982
5.	UK (ROYAL NAVY) Part 3 Grapple Y, Grapple Z and Operations not listed in Parts 1 & 2	SFS / OEL / UNB / 1 (P)	11/03/1982
6.	UK (ARMY)	SFS / OEL / UMB / 1 (P)	10/03/1982
7.	UK (ROYAL AIR FORCE) Part 1 (A – L)	SFS / OEL / UAB / 1 (P)	16/03/1982
8.	UK (ROYAL AIR FORCE) Part 2 (M – Z)	SFS / OEL / UAB / 1 (P)	16/03/1982
9.	Citizens of Australia	SFS / OEL / AB / 1 (P)	28/01/1982
10.	Citizens of Australia	SFS / OEL / AA / 1 (P)	29/01/1982
11.	Miscellaneous	SFS / OEL / MISCB / 1 (P)	27/04/1982

COPIES HELD IN A6.1 ARCHIVE and TEST VETERAN ARCHIVE A38.1.



11



DIRECTORATE OF STRATEGIC TECHNOLOGIES

FACSIMILE TRANSMITTAL SHEET

TO: [REDACTED] FROM: [REDACTED]

COMPANY: AWE DATE:

FAX NUMBER: 0118 982 5796 TOTAL NO. OF PAGES INCLUDING COVER: 1

PHONE NUMBER: SENDER'S REFERENCE NUMBER:

RE: Test Vet Medical Records YOUR REFERENCE NUMBER:

- URGENT  FOR REVIEW  PLEASE COMMENT  PLEASE REPLY  PLEASE RECYCLE

NOTES/COMMENTS:

[REDACTED]

[REDACTED] has asked the following question:

“What restrictions apply on the provision of the medical records of ex-servicemen or ex-Military medical auxiliaries who were present at British nuclear tests conducted at Christmas and Malden Islands”

The answer is due by 7 Jan 2003. Have you any idea whether there are any particular restrictions on the records of those who served at Christmas Island and Malden Island? Grateful for any ideas.

I am back in the office on 6 Jan.

Happy Christmas and a Happy New Year!

[REDACTED]

*Rec'd 06.01.03 following phone call reply.*

AWE

JOB #900

DATE	TIME	TO/FROM	MODE	MIN/SEC	PGS	STATUS
001	12/04	09:16	02392768150	EC--S	00' 32"	002 OK

TIME RECEIVED:  
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**FACSIMILE LEADER SHEET**

From: ██████████ Bldg No. ██████████  
To: ██████████ Fax No. 023 92 768150

AWE, Aldermaston  
Reading  
Berks  
RG7 4PR  
Tel. 0118 981 4111  
Direct Tel. ~~0118 982 4994~~  
Fax. 0118 982 5796

TRANSMISSION COMPRISES **2**. PAGE(S), INCLUDING THIS PAGE

Message :

██████████,  
*That effort as discussed.*

*Please use mod 0211 as identifier for any response.  
(our ref.)*

*Regards*

██████████

Signed: ██████████ Ext: *4494*

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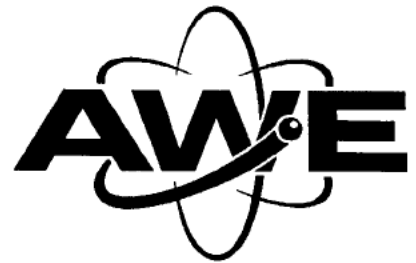
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FACSIMILE LEADER SHEET

From: [REDACTED]

Bldg No. [REDACTED]

AWE, Aldermaston  
Reading  
Berks  
RG7 4PR

To: [REDACTED]

Fax No. 023 92 768150

Tel. 0118 981 4111  
Direct Tel. 0118 9824494  
Fax. 0118 982 5796

TRANSMISSION COMPRISES 2. PAGE(S), INCLUDING THIS PAGE

Message :

[REDACTED]

*Trial effort as discussed.*

*Please use mod 0211 as identifier for any response.  
(Ous.ref.)*

*Regards*

[REDACTED]

Signed:

[REDACTED]

Ext: 4494

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[REDACTED]

[REDACTED]

Reply to: [REDACTED]  
Direct Dial: 0118 982 4494  
Direct Fax: 0118 982 5796  
e-mail: [REDACTED]  
Our Ref.: AWE/HPRK/B/LET/HE/NTV/MoD0211  
Your Ref.: D/Strat Tech fax dated 26/11/2002

[REDACTED]

27 November 2002

[REDACTED]

re: [REDACTED]

In reply to your request of 26<sup>th</sup> November, 2002, from the information held in the AWE archive, the response by AWE to the MoD is detailed below:-

AWE have information for four RAF servicemen with the surname [REDACTED], whose forenames include the initial [REDACTED] and who served with the RAF on UK nuclear trials. Only two were recorded as present at Kiritimati during 1957 and 1958. One served for two months at Kiritimati before the GRAPPLE trials and the other in 1958 after the GRAPPLE Z trials had taken place. Neither person satisfies the description of trials attendance given in [REDACTED] letter.

If further details were supplied by [REDACTED] regarding his identity and service with the RAF at Kiritimati, we would be able to search our records more effectively and prepare an informed response.

Yours sincerely,

[REDACTED]



Reply to: [REDACTED]  
Direct Dial: 0118 982 4494  
Direct Fax: 0118 982 5796  
e-mail: [REDACTED]

Aldermaston • Reading  
Berkshire • RG7 4PR  
Tel (0118) 981 4111 Fax (0118) 981 5320

Our Ref.: AWE/HPRK/B/LET/HE/NTV/DSS0202  
Your Ref.:

02 July 2002

[REDACTED]  
[REDACTED] ge [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

re: [REDACTED]

I have received your request for information regarding [REDACTED] who claims to have been exposed to ionising radiation in Japan in 1953 and 1954. For your information I have passed this request to [REDACTED] [REDACTED] Sc(Nuc)2 MoD who deals with enquiries regarding Hiroshima/Nagasaki.

Apologies that I could not be of further help to you.


Yours sincerely,

[REDACTED]

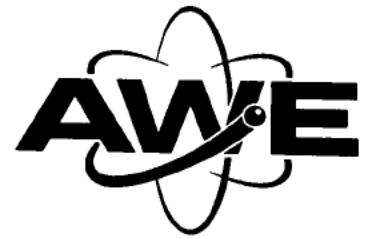


[REDACTED]

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 Secretary of State for Defence





Reply to: [REDACTED]  
Direct Dial: 0118 982 4494  
Direct Fax: 0118 982 5796  
e-mail: [REDACTED]

Our Ref.: AWE/HPRK/B/LET/NTV/PS0203  
Your Ref.: D/D Strat Tech/15/8/4

Aldermaston • Reading  
Berkshire • RG7 4PR  
Tel (0118) 981 4111 Fax (0118) 981 5320

[REDACTED]

28 May 2002

[REDACTED]

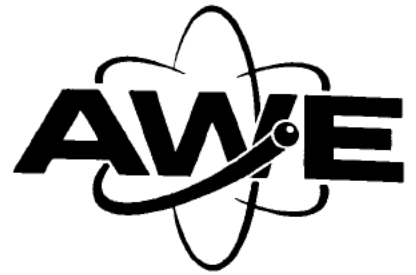
In reply to your fax dated Wednesday 22<sup>nd</sup> May regarding information on [REDACTED].

With regards to the 'Blue Book' entries, past correspondence clarifies the situation. These books were prepared in the early 1980s as listings of persons at UK overseas defence nuclear experimental programmes. It was accepted that they were provisional and may not be complete and may contain errors.

Within the 'Blue Books' [REDACTED]s named as being at Grapple Y and Grapple Z. This information was obtained from the 76<sup>th</sup> Squadron Operation Record Books (ORBs). Operation Order No. 2/58 (5<sup>th</sup> March 1958) Appendix 'C' is the Nominal Roll for the Rear Element of the 76<sup>th</sup> Squadron based at Edinburgh Airfield (copy enclosed) for the Grapple Y nuclear trial on 28<sup>th</sup> April 1958. [REDACTED]s name and service number appear under the heading 'airmen'. There is no other information to support the case for [REDACTED] participation on Christmas Island for Grapple Y.

Operation Order No.3/58 (4<sup>th</sup> July 1958) Appendix 'C' is the Nominal Roll for the Rear Element of the 76<sup>th</sup> Squadron based at Edinburgh Airfield (copy enclosed) for the Grapple Z





[REDACTED]

nuclear trial on 22<sup>nd</sup> August 1958. [REDACTED]'s name and service number appear under the heading 'Groundcrew'. Again AWE has no other information relating to [REDACTED]. It is noted in previous correspondence that information obtained from [REDACTED] provides evidence that he did not attend Grapple Z; he had already departed for Britain. His service record shows that he was at a UK Home Establishment (HE) prior to Grapple Z. This information was presumably unknown during the compilation of the 'Blue Books'. There is no supporting evidence in the Operation Orders or the ORBs that [REDACTED] attended either Grapple Y or Z.

[REDACTED] states that he attended Grapple X. Throughout his correspondence with AWE via the MoD etc., it has never been denied that he may have attended this test. The dates on his service record corresponding to his posting at RAAF Edinburgh coincide with Operation Grapple X. As in previous requests, we repeated the thorough examination of the information held in the AWE archives, no documented evidence was found regarding his attendance at Grapple X.

A significant amount of time and resource has again been spent on answering a request from [REDACTED]. It is our belief that he has received all AWE's information regarding his participation at the UK nuclear tests. Our latest response neither adds any new information nor contradicts any past reply.

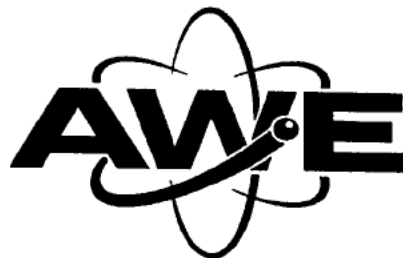
Yours sincerely,

[REDACTED]

TIME RECEIVED:  
DATE:

[REDACTED]

**PROTECTIVE MARKING  
SHALL BE COMPLETED**



**FACSIMILE LEADER SHEET**

From: [REDACTED]  
To: [REDACTED]

Bldg No. [REDACTED]  
Fax No. 02072181769

AWE, Aldermaston  
Reading  
Berks  
RG7 4PR  
Tel. 0118 981 4111  
Direct Tel.  
Fax. 0118 982 5796

TRANSMISSION COMPRISES 3 PAGE(S), INCLUDING THIS PAGE 3

Message :

[REDACTED]

The 2 articles we have on [REDACTED] mentioned  
on the phone

[REDACTED]

Ext:

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[REDACTED]

## IT'S PAYBACK TIME

Jun 17 2001  
Sunday Sun

Servicemen involved in Britain's atomic bomb tests WERE exposed to radiation . . . despite Ministry of Defence denials.

For decades, the MoD have claimed that British, Australian and New Zealand servicemen were not blasted with dangerously-high levels of radiation during nuclear tests in the 1950s.

But evidence has emerged that some servicemen were exposed to the deadly effects of the experiments. Thomas

Wilson, 68, of Ferguson Lane, Newcastle, was a 20-year-old Royal Engineer at the time.

He was at Britain's first atomic bomb test at Monte Bello island, off Australia, in 1952 and says documentation he was given then proves that the levels he was exposed to exceeded safety guidelines.

After the explosion, he was sent back to the island as part of a team collecting samples for British scientists to analyse.

He still has his old Army paybook which records he was exposed to 1.99 roentgens.

A roentgen is an old measurement now replaced with millisieverts. There are around 10 millisievert in a roentgen and

workers in the nuclear industry are only allowed to be exposed to 20 millisieverts a year. Mr Wilson was exposed to the equivalent amount all at once.

He said: "After the explosion, we were told to volunteer to help pick up samples off the ground on the island. I ended up being covered in the fall-out.

"They never warned us of the danger and I only found how dangerous the job was when I was being scrubbed down.

"I was told if I had any strange illnesses I had to immediately tell my doctor I had been in the tests.

"After the tests many of us had bad toothache and while we were coming home aboard a

Royal Navy ship, my teeth started falling out. When I pointed out to the MoD that I had this entry in my paybook, I was told it was a mistake and I should send it back.

"I refused point-blank because I know I wouldn't have seen it again."

Mr Wilson's daughter Pauline was born with a type of cancer called Letterer-Siwe. He says at the time she was diagnosed as having the disease he was told by doctors it was an extremely rare cancer in the UK.

They said it was widespread in hot countries and could be caused by radiation.

"My wife Molly never left Newcastle all the time she was carrying Pauline, so I believe that we can discount the hot countries," he said.

An MoD spokesman said: "Mr Wilson's exposure was considered to be within the safe limits at the time of the tests.

"An Australian Royal Commission report in 1985 shows the average exposure for servicemen was less than five millisieverts during the tests. This is well within safe levels."

News

## SOLDIER'S TEETH FELL OUT AFTER N-TEST

Jun 18 2001

The Journal

New evidence has emerged that servicemen were exposed to unsafe radiation levels in Britain's atomic bomb tests, despite denials by the Ministry of Defence.

For decades the MoD has claimed the British, Australian and New Zealand soldiers were not blasted with dangerous levels of radiation during nuclear tests in the 1950s.

But new evidence shows the men were exposed to deadly radioactive particles.

Thomas Wilson, 68, of Ferguson Lane, Newcastle, was a 20-year-old Royal Engineer when he took part in the experiments.

He was at Britain's first atomic bomb test at Monte Bello Island, off Australia, in 1952 and says documentation he was given proves the levels he was given exceeded safety guidelines. After the explosion, he was part of the British team sent back to the island to collect samples for analysis.

And he still has his old army paybook which records that he was exposed to 1.99 roentgens of radiation in one dose.

This is equivalent to the amount a nuclear worker is allowed to be exposed to in a year.

He said: "After the explosion, we were told to volunteer to help pick up samples on the island.

"I ended up being covered in the fall-out. They never warned us of the danger until later.

"After the tests many of us had bad toothache and while we were coming home aboard a Royal; Navy ship, my teeth started falling out."

Mr Wilson's daughter Pauline was born with a type of cancer called Letterer-Siwe. He says at the time she was diagnosed he was told it was an extremely rare cancer and could be caused by radiation.

A Ministry of Defence spokesman said: "Mr Wilson's exposure was considered safe at the time of the tests. An Australian Royal Commission report in 1985 shows the average exposure for servicemen was less than five milliseiverts during the tests. This is well within safe levels."

AWE

JOB #102

DATE	TIME	TO/FROM	MODE	MIN/SEC	PGS	STATUS
001 7/16	10:16	0171 218 1769	EC--S	08' 03"	021	OK

TIME RECEIVED:  
DATE:



PROTECTIVE MARKING SHALL BE COMPLETED



FACSIMILE LEADER SHEET

From: [Redacted] Bldg No. [Redacted]  
To: [Redacted] Fax No. 02072181769

AWE, Aldermaston  
Reading  
Berks  
RG7 4PR  
Tel. 0118 981 4111  
Direct Tel.  
Fax. 0118 982 5796

TRANSMISSION COMPRISES 21 PAGE(S), INCLUDING THIS PAGE

Message :

[Redacted]

There are 12 A4 pages that make up the 3 days from the HMS Narvik log book of detonations

Grapple 1 (15<sup>th</sup> May 1957)  
Grapple 2 (31<sup>st</sup> May 1957)  
Grapple 3 (19<sup>th</sup> June 1957)

I've numbered the pages to make it easier for you to stick them together

Pages 1-4 (15/57)    Pages 5-8 (31/57)    Pages 9-12 (19/57)

1	2
3	4

5	6
7	8

9	10
11	12

Also I've faxed lists written of (I think) what is written on the log book sheets (as you can see they're not very easy to read).  
Let me know if this hasn't faxed too well and you want a copy in the post instead.

[Redacted]

Ext: 01189 824494

ORIGINATORS

- 1) UNLESS THE ADJACENT BOX IS TICKED, THIS LEADER SHEET AND ANY ATTACHMENTS WILL BE DESTROYED.
- 2) TRANSMISSIONS WITHIN THE UNITED KINGDOM, EXCLUDING NORTHERN IRELAND, ARE LIMITED TO RESTRICTED. FOR CONFIDENTIAL AND ABOVE, CONTACT THE COMMUNICATIONS CENTRE ON EXT. 5957. TRANSMISSIONS TO NORTHERN IRELAND AND THE REST OF THE WORLD SHALL BE LIMITED TO UNCLASSIFIED ONLY.

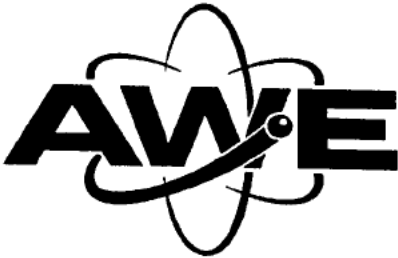
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TIME RECEIVED:  
DATE:

PROTECTIVE MARKING  
SHALL BE COMPLETED



FACSIMILE LEADER SHEET

From: [Redacted]  
To: [Redacted]

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1	2
3	4

5	6
7	8

9	10
11	12

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PROTECTIVE MARKING

1

H.M.S. NAUKIK Monday 15<sup>th</sup> of MAY 1957

Time	Log Reading	Distance Run Miles and Tenths	Mean Revs. Per Min.	True Course	Error of "A" Gyro	Error of "B" Gyro	Course by Auxiliary Compass	Variation	Deviation	Wind		Weather and Visibility	Waves		Corrected Barometric pressure in Millibars	Temperature of F.		
										Speed in Knots	Direction From		Direction From	Period in Seconds		Height in Feet	Dry Bulb	Wet Bulb
0001	81 52.5	2.2	55.3	030°			019°	10°E	10°E									
0100	81 54.8	2.3	54	030°			019°	10°E	10°E									
0200	81 56.9	1.9	52.1	200°			191°	10°E	10°W									
0300	81 58.7	1.8	40	210°			201°	10°E	19°W	090	2	5/8			1011	82.5	82.2	5
0400	81 60.1	1.4	40	010°			260°	10°E	-									
0500	81 61.5	1.4	40	340°			330°	10°E	-									
0600	81 63.5	2.0	40	340°			330°	10°E	-									
0700	81 65.3	1.8	40	055			044	10°E	1°E	4	8	8	020	5	1011.8	82	81	25
0800	81 68.7	3.4	76.6	090			071	16°E	9°E									
0900	81 70.1	1.4	37.8	160			154	10°E	4°W									
1000	81 73.2	3.1	53.1	115			104	10°E	1°E									
1100	81 77.1	3.9	95.3	270			259	10°E	1°E	3	110	5/8	0	42	1012	83.5	83.5	8

Ship's Berth and Anchor Bearings  
Currents Experienced (See) Notice of Main Engine



From \_\_\_\_\_ to \_\_\_\_\_, or at SEA

REMARKS	Initials of the Quarter-master	Initials of the Officer of the Watch or Day
---------	--------------------------------	---

0012 Revolutions 54      0020 "A" side 197°(N) 7.4'(R)      0036 NE Pt 190° 7.6'(R)  
 0020 a/c 030°      0031 "A" side 198°(N) 8'(R)      0058 met Balloon released.

0201 NE Pt. Balloon 194 1/2° 12.8'      0243 a/c 200°  
 0215 NE Pt Balloon 193 1/2° 13.8'      0253 Revolutions 40  
 0220 a/c 035°  
 0305 NE Balloon 202° 15.3'      0353 NE Balloon 203° 13.2'  
 0327 NE Pt Balloon 201° 14.2'      0355 a/c 210°  
 0417 a/c 010°

0520 a/c 340°

0605 Met balloon released.

0723 a/c 055°      0740 N.E. Balloon HA - 19.9 miles.  
 0730 Ball under, loads engaged in preparation for under load.  
 0750 Hade to flying stations.      0810 a/c 110 Revs 100      0835 Aft down X S.C. LA  
 0805 a/c 110 Revs 100      0844 Helicopter landed on TPC and party arrived in boat.  
 0808 Helicopter landed on      0845 Helicopter took off. Secure flying stations a/c 090 Revs 60.  
 0809 Helicopter took off. a/c 055

0912 a/c 180  
 0942 a/c 172  
 0959 a/c 160  
 1006 Revs 40  
 1037 Pegasus Bomb fired.      1053 Revs 60      1059 Revs 100

1057 a/c 115 Revs 40      1112 Helicopter landed on TPC and party arrived in boat.  
 1101 a/c 130      1121 Helicopter took off.  
 1105 Helicopter landed on TPC and party arrived in boat.  
 1127 Helicopter landed on TPC and party arrived in boat.  
 1130 Helicopter took off.

Ship's Draught		Leave granted to Ship's Company	Number on Sick List	A.B.C.D. State	Result of Daily Muster of Signal Publications
Quantity for Notation	Forward      Aft				
		N/A	10	1A, 2, 3	

3

1000	8173.2	3.1	53.1	115	154	10°E	4°W												
1100	8177.1	3.9	95.3	270	259	10°E	1°E	3	110	$\frac{1}{8}$	CAL								

Zone time kept at Noon	Distance Run through the Water (Midnight to Midnight)	Position	Latitude	Longitude	Depending on	Ship's Berth and Anchor Bearings	Currents Experienced (Sea) Notice of Main Engines for Steam (Harbour)
		0800	3° 40'S	154° 48'W	Radar Fix		
		1200	3° 46'S	154° 46'W	Radar Fix		
+9	53.9	2000				Mooring Buoys Mollen	4 hours

1200	8183.4	6.3	131.1	230	219	10°E	1°E												
1300	8191.3	7.9	140	250	239	10°E	1°E												
1400	8197.5	6.2	102.5	160	089½	10°E	½°E												
1500	8199.2	1.7	45.6			10°E		2	110	$\frac{1}{8}$	020	9	1	1009.9	88	845	84		
1600	8204.0	4.8	87.6																
1700		0.4	4.5																
1800																			
1900																			
2000								2	120	$\frac{1}{8}$				1010.	835	82	83		
2100																			
2200																			
2300								1	115	$\frac{1}{8}$				1011.4	83	81	80		

Various  
 course and speed as required 10°E  
 As requisite for securing to buoy

1942 a/c 170  
 1959 a/c 160  
 1006 a/c 40  
 1007 a/c 115  
 1008 a/c 115  
 1009 a/c 115  
 1010 a/c 115

1053 a/c 60 1059 a/c 100

1006 a/c 40  
 1007 a/c 115  
 1008 a/c 115  
 1009 a/c 115  
 1010 a/c 115

1053 a/c 60 1059 a/c 100  
 1132 a/c 150  
 1133 a/c 150  
 1134 a/c 150  
 1135 a/c 150  
 1136 a/c 150  
 1137 a/c 150  
 1138 a/c 150  
 1139 a/c 150  
 1140 a/c 150  
 1141 a/c 150  
 1142 a/c 150  
 1143 a/c 150  
 1144 a/c 150  
 1145 a/c 150  
 1146 a/c 150  
 1147 a/c 150  
 1148 a/c 150  
 1149 a/c 150  
 1150 a/c 150

Ship's Draught			Leave granted to Ship's Company	Number on Sick List	A.B.C.D. State	Result of Daily Muster of Signal Publications
Occasion for Notation	Forward	Aft				
			NIL	110	1A, 2 + 3	Signature of Mustering Officer

1201 a/c 185 a/c 143 1234 Helicopter landed on.  
 1210 Helicopter landed on. 1225 Helicopter left ship with Mr Cook. Secure flying station.  
 1215 Helicopter took off a/c 230  
 1315 a/c 205  
 1323 Assume DC state 1 BRAVO  
 1356 a/c 250  
 1407 Made to flying station. a/c 270  
 1420 a/c 165  
 1425 Helicopter landed on with contaminated sea by team.  
 1430 a/c 100  
 1435 a/c 90  
 1440 Helicopter landed on with contaminated sea by team.  
 1445 Helicopter took off.  
 1450 a/c 260  
 1455 a/c 260  
 1460 a/c 260  
 1465 a/c 260  
 1470 a/c 260  
 1475 a/c 260  
 1480 a/c 260  
 1485 a/c 260  
 1490 a/c 260  
 1495 a/c 260  
 1500 a/c 260  
 1505 a/c 260  
 1510 a/c 260  
 1515 a/c 260  
 1520 a/c 260  
 1525 a/c 260  
 1530 a/c 260  
 1535 a/c 260  
 1540 a/c 260  
 1545 a/c 260  
 1550 a/c 260  
 1555 a/c 260  
 1560 a/c 260  
 1565 a/c 260  
 1570 a/c 260  
 1575 a/c 260  
 1580 a/c 260  
 1585 a/c 260  
 1590 a/c 260  
 1595 a/c 260  
 1600 a/c 260  
 1605 a/c 260  
 1610 a/c 260  
 1615 a/c 260  
 1620 a/c 260  
 1625 a/c 260  
 1630 a/c 260  
 1635 a/c 260  
 1640 a/c 260  
 1645 a/c 260  
 1650 a/c 260  
 1655 a/c 260  
 1660 a/c 260  
 1665 a/c 260  
 1670 a/c 260  
 1675 a/c 260  
 1680 a/c 260  
 1685 a/c 260  
 1690 a/c 260  
 1695 a/c 260  
 1700 a/c 260  
 1705 a/c 260  
 1710 a/c 260  
 1715 a/c 260  
 1720 a/c 260  
 1725 a/c 260  
 1730 a/c 260  
 1735 a/c 260  
 1740 a/c 260  
 1745 a/c 260  
 1750 a/c 260  
 1755 a/c 260  
 1760 a/c 260  
 1765 a/c 260  
 1770 a/c 260  
 1775 a/c 260  
 1780 a/c 260  
 1785 a/c 260  
 1790 a/c 260  
 1795 a/c 260  
 1800 a/c 260  
 1805 a/c 260  
 1810 a/c 260  
 1815 a/c 260  
 1820 a/c 260  
 1825 a/c 260  
 1830 a/c 260  
 1835 a/c 260  
 1840 a/c 260  
 1845 a/c 260  
 1850 a/c 260  
 1855 a/c 260  
 1860 a/c 260  
 1865 a/c 260  
 1870 a/c 260  
 1875 a/c 260  
 1880 a/c 260  
 1885 a/c 260  
 1890 a/c 260  
 1895 a/c 260  
 1900 a/c 260  
 1905 a/c 260  
 1910 a/c 260  
 1915 a/c 260  
 1920 a/c 260  
 1925 a/c 260  
 1930 a/c 260  
 1935 a/c 260  
 1940 a/c 260  
 1945 a/c 260  
 1950 a/c 260  
 1955 a/c 260  
 1960 a/c 260  
 1965 a/c 260  
 1970 a/c 260  
 1975 a/c 260  
 1980 a/c 260  
 1985 a/c 260  
 1990 a/c 260  
 1995 a/c 260  
 2000 a/c 260

BAK

4

5

H.M.S. 'NARVIK'

FR, day 31<sup>st</sup> of MAY 1957

Time	Log Reading	Distance Run Miles and Tenths	Mean Revs. Per Min.	True Course	Error of "A" Gyro	Error of "B" Gyro	Course by Auxiliary Compass	Variation	Deviation	Wind		Weather and Visibility	Waves			Corrected Barometric pressure in Millibars	Temperature	
										Speed in Knots	Direction From		Direction From	Period in Seconds	Height in Feet		Dry Bulb	Wet Bulb
0001	8307	2.4	70.5	035°			024°	10°E	1°E									
0100	8311.1	4.1	70	035°			024°	10°E	1°E									
0200	8313.3	2.1	56.5	190°			180°	10°E	-									
0300	8314.6	1.3	40.	180°			170°	10°E	-	7	090°	bc/8	070	6	3.	1008	85 80	
0400	8318.7	4.1	72	040°			028°	10°E	2°E									
0500	8321.9	3.2	80	040°			028°	10°E	2°E									
0600	8325.6	3.7	68.9	050°			038°	10°E	2°E									
0700	8327.4	3.8	70.6	050			050 <sup>00</sup> 038	10°E	2°E	12	080	bc/7	070	4	4	1009	84 80	
0800	8334.9	5.5	116	100			088	10°E	2°E									
0900	8338.0	3.1	75.9	160			150	10°E	-									
1000	8339.8	1.8	48.8	110			098	10°E	2°E									
1100	83342.9	3.1	72.3	240			231	10°E	1°W	12	120	bc/7	130	5	4	1009	87 87 85	

Zone	Distance Run	Position	Latitude	Longitude	Depending on	Ship's Berth and Anchor Bearings	Currents Experienced (Sea) Notice of Main Engines for Steam
------	--------------	----------	----------	-----------	--------------	----------------------------------	---

From

to

, or at MALDEN ISLAND.

REMARKS

Initials of the Quartermaster

Initials of the Officer of the Watch or Day

0001 Revs 70 a/c 040°  
 0002 A/c 055°  
 0021 A site 215° 5.3'

0035 A site 217° 6.5'

0100 A site 217° 7.5' 0130 NE Pt 201° 8' 0154 NE Balloon 198° 9.2'

0208 NE Balloon 197° 10' 0215 1/2 090° Revs 50. 0230 NE Balloon 201° 10'. 0240 NE Balloon 201° 11'  
 0245 net Balloon released 0246 at 190° Revs 40.

0302 NE Balloon 203° 11' 0334 N.E. Balloon 199° 9.16' 0355 } A site 206°  
 0319 NE Balloon 201° 11' 0335 1/2 180° } NE Pt 196° 7.8'

0417 a/c 085° 80 revolutions. 0444 a/c 040°

0615 a/c 340° 60 revolutions.  
 0645 a/c 050°

0700 70 revolutions  
 0710 70 revolutions; hands employed carrying out 2 day preparations.  
 0750 70 revolutions.  
 0755 70 revolutions.  
 0809 a/c 090. Slow ahead both engines 0813 Helicopter took off. 0847 Hands to flying stations a/c 090 Revs 120  
 0812 Helicopter landed on. 0815 Relax flying stations 0852 a/c 100 0854 Helicopter landed on  
 0907 Revs 100. 0922 a/c 135 0855 Helicopter took off  
 0915 Revs 040 0924 Revs 060. secure flying stations  
 0919 Revs 050 0953 a/c 160

1005 Stopped 1st engine. 1042 weapon fired (OH)  
 1007 Revs 80. 1045 a/c 110 Revs 60 Both engines halt ahead.  
 1035 a/c 180

1105 Hands to flying stations 1120 Net. Balloon released. 1142 Helicopter landed on.  
 1116 Helicopter landed on. 1132 Helicopter landed on. 1142 Helicopter took off.  
 1133 Helicopter took off. 1155 Revs 140 a/c 240

Leave granted to Ship's Company

Number on Sick List

A.B.C.D. State

Result of Daily Muster of Signal Publications

Quantity for Notation Forward Aft

N/A

0

10/10 22

0900	8338.0	3.1	75.9	160	150	10°E													
1000	8339.8	1.8	48.8	110	098	10°E	2°E												
1100	8334.29	3.1	72.7	210	231	10°E	1°W	12	120	bc	130	5	4	1009	87	87	85		

Time kept at Noon	Distance Run through the Water (Midnight to Midnight)	Position	Latitude	Longitude	Depending on	Ship's Berth and Anchor Bearings	Currents Experienced (Sea)				Notice of Main Engines for Steam (Harbour)				
		0800	.	.	.										
		1200													
		2000													

Mooring Buoy Malden.  
4 hours / slow speed

(7)

1200	8350.5	7.6	129.5	230	219	10°E	1°E												
1300	8358.6	8.1	133.3	230	219	10°E	1°E												
1400	8360.6	2.0	42.5	080	068	10°E	2°E												
1500	8363.6	3.0	60.2	—	—	10°E		14	120	bc	7	110	4	9	1007.3	87½	86		
1600	8366.3	2.7	36.7																
1700																			
1800																			
1900								8	105	bc	7				1009.7	85½	82	85	
2000																			
2100																			
2200																			
2300								10	120	bc	7				1011.7	82	80	85	

040 0934 Run 060  
 050 0953 a/c 160  
 Stopped 1st engine 1042 wear fixed (OH)  
 1045 a/c 110 Run 60 3rd engine halt ahead.

Ship's Draught			Leave granted to Ship's Company	Number on Sick List	A.B.C.D. State	Result of Daily Muster of Signal Publications
Notation	Forward	Aft				
			NIL	9	1A+1B+3.2	Signature of Mustering Officer

16 a/c 130 Run 120. Shuts ahead both engines. 1247 a/c 230.  
 1718 Helicopter landed on  
 1720 a/c 220 Halt ahead 1st engine. Run 140.  
 1722 Helicopter flying stations  
 1727 Helicopter DC state 3  
 1728 Helicopter flying station 185.  
 1732 Helicopter fall in on the right deck, port watch rescue.  
 1734 a/c 080  
 1735 Run 40  
 1737 Helicopter landed on with DTFE + H. Cole  
 1739 Helicopter landed on with DTFE + H. Cole  
 1740 Helicopter landed on with DTFE + H. Cole  
 1741 Helicopter landed on with DTFE + H. Cole  
 1742 Helicopter landed on with DTFE + H. Cole  
 1743 Helicopter landed on with DTFE + H. Cole  
 1744 Helicopter landed on with DTFE + H. Cole  
 1745 Helicopter landed on with DTFE + H. Cole  
 1746 Helicopter landed on with DTFE + H. Cole  
 1747 Helicopter landed on with DTFE + H. Cole  
 1748 Helicopter landed on with DTFE + H. Cole  
 1749 Helicopter landed on with DTFE + H. Cole  
 1750 Helicopter landed on with DTFE + H. Cole  
 1751 Helicopter landed on with DTFE + H. Cole  
 1752 Helicopter landed on with DTFE + H. Cole  
 1753 Helicopter landed on with DTFE + H. Cole  
 1754 Helicopter landed on with DTFE + H. Cole  
 1755 Helicopter landed on with DTFE + H. Cole  
 1756 Helicopter landed on with DTFE + H. Cole  
 1757 Helicopter landed on with DTFE + H. Cole  
 1758 Helicopter landed on with DTFE + H. Cole  
 1759 Helicopter landed on with DTFE + H. Cole  
 1760 Helicopter landed on with DTFE + H. Cole  
 1761 Helicopter landed on with DTFE + H. Cole  
 1762 Helicopter landed on with DTFE + H. Cole  
 1763 Helicopter landed on with DTFE + H. Cole  
 1764 Helicopter landed on with DTFE + H. Cole  
 1765 Helicopter landed on with DTFE + H. Cole  
 1766 Helicopter landed on with DTFE + H. Cole  
 1767 Helicopter landed on with DTFE + H. Cole  
 1768 Helicopter landed on with DTFE + H. Cole  
 1769 Helicopter landed on with DTFE + H. Cole  
 1770 Helicopter landed on with DTFE + H. Cole  
 1771 Helicopter landed on with DTFE + H. Cole  
 1772 Helicopter landed on with DTFE + H. Cole  
 1773 Helicopter landed on with DTFE + H. Cole  
 1774 Helicopter landed on with DTFE + H. Cole  
 1775 Helicopter landed on with DTFE + H. Cole  
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 1777 Helicopter landed on with DTFE + H. Cole  
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 1781 Helicopter landed on with DTFE + H. Cole  
 1782 Helicopter landed on with DTFE + H. Cole  
 1783 Helicopter landed on with DTFE + H. Cole  
 1784 Helicopter landed on with DTFE + H. Cole  
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 1789 Helicopter landed on with DTFE + H. Cole  
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 1798 Helicopter landed on with DTFE + H. Cole  
 1799 Helicopter landed on with DTFE + H. Cole  
 1800 Helicopter landed on with DTFE + H. Cole

1645. Stbl. W. L. resumed. Port watch ball on P.D.  
 1730. Duty Port + Emergency Parties mustered. L.C.P. resumed station.  
 1754 Sunset L.C.P. Mustered.

28

9

H.M.S. NARVIK

Wednesday 19th of JUNE 1957

Time	Log Reading	Distance Run Miles and Tenths	Mean Revs. Per Min.	True Course	Error of "A" Gyro	Error of "B" Gyro	Course by Auxiliary Compass	Variation	Deviation	Wind		Weather and Visibility	Waves			Corrected Barometric pressure in Millibars	Temperature °F.		
										Speed in Knots	Direction From		Direction From	Period in Seconds	Height in Feet		Dry Bulb	Wet Bulb	Sea
0001	9086.7	4.2	75.5	051°			041°	10°E	-										
0100	9090.7	4.0	70.0	065°			055°	10°E	-										
0200	9093.2	2.5	52.3	180°			170°	10°E	-										
0300	9094.8	1.6	40.	180°			170°	10°E	-	4	090°	bc/8	CALM.		1008.9.	83	78	85	
0400	9096.4	1.6	40	030°			020°	10°E	-										
0500	9098.6	2.2	40	030°			020°	10°E	-										
0600	9101.1	2.5	46.6	065°			054°	10°E	1°E										
0700	9105.1	4.0	70.9	065			054	10°E	1°E	10	130	bc/8	120	4	2	1009.0	82.2	77.6	85
0800	9110.8	5.7	92	115			105	10°E	.										
0900	9112.1	1.3	40	160			149	10°E	1°E										
1000	9114.5	2.4	57	120			109	10°E	1°E										
1100	9118.7	4.2	78.8	130			120	10°E	.	6	130	bc/8	120	4	2	1008.5	85.5	78.5	85

Zone time kept at	Distance Run through the Water (Midnight to Midnight)	Position	Latitude	Longitude	Depending on	Ship's Berth and Anchor Bearings	Currents Experienced (Sea) Notice of Main Engines for Steam (Harbour)
	0800	03° 38'S	154° 40'W	Radar Fix	11. R		



From \_\_\_\_\_ to \_\_\_\_\_, or at MALDEN ISLAND

REMARKS	Initials of the Quartermaster	Initials of the Officer of the Watch or Day
0030 a/c 045° Revs 70. 0030 a/c 051° 0050 Released Met Balloon.		
0037 { NE Balloon bore 180° 8-125'. 0045 NE Balloon bore 182½° 9-110'		
0105 N.E. Balloon 184½° - 10-1' 0135 a/c 065° 0147 NE Balloon 192½° 12-7'		
0127 NE Balloon 189½° - 11-6' 0225 NE Balloon 201½° 14-5'		
0147 NE Balloon 199½° 13-7' 0242 a/c 180° Revs 40. 0247 NE Balloon 201½° 15-45'		
0312 N.E. BALLOON 202½° 14-8' 0325 N.E. BALLOON 200½° 14-3' 0327 N.E. BALLOON 199½° 13-5'		
0417 a/c 030° 0455 Met Balloon re-board. 0455 a/c 350°		
0520 a/c 066° Revs 60. 0724 Sunrise Sun's bearing 066½. 0755 Revolution 90.		
0730 Both watches of the hands clean ship. 0755 Revolution 90. 0746 N.E. Balloon 192° - 20-2 miles. 0800 Heide & Flynn Station. 0853 Revs 60. 0805 a/c 080 0830 Assume De stall 1A. 0847 a/c 115 0850 Helicopter landed on. 0851 Helicopter took off.		
0815 Revs 100 a/c 110 0826 Helicopter landed on and took off. 0826 Helicopter landed on and took off. a/c 080. 0826 Helicopter landed on and took off. a/c 080.		

Tg	57.4		1200	03° 45S	154° 45W	E. F.	Malden.				210 U.S. Km H. 2000						
			2000														
1200	9126.1	7.4	115.7	230		219	10° E	1° E									
1300	9132.4	6.3	126.3	130		120	10° E	-									
1400	9138.5	6.1	105				10° E										
1500	9139.9	1.4	As responsible for coming to buoy				16° E		8	120	64	165	4	2	1608.5	92	81.5
1600																	
1700																	
1800																	
1900									7	100	62				1010	82	75.5
2000																	
2100																	
2200																	
2300									6	665	66				1011	80	71.5

11

1029 Port engine half ahead Revs 80.  
 1400 Weapon fired over Madden. P.G. live  
 057 A/C 120 Hands to Flying Stations  
 1129 Helicopter landed on 1132 A/C 230 Revs 90  
 1132 Helicopter took off

Helicopter landed on and took off. Net Balloon released

Ship's Draught			Leave granted to Ship's Company	Number on Sick List	A.B.C.D. State	Result of Daily Muster of Signal Publications
Position for Notation	Forward	Aft				
			Mr.	7	1A + 1B. 2 + 3	Signature of Mustering Officer

1700 A/C 130 Slow ahead Port.  
 1205 Half ahead both.  
 1213 Helicopter landed on  
 1214 Helicopter took off  
 1215 Helicopter took off  
 1216 Helicopter took off  
 1217 Helicopter took off  
 1218 Helicopter took off  
 1219 Helicopter took off  
 1220 Helicopter took off  
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 1294 Helicopter took off  
 1295 Helicopter took off  
 1296 Helicopter took off  
 1297 Helicopter took off  
 1298 Helicopter took off  
 1299 Helicopter took off  
 1300 Helicopter took off

Captain left for Manila.

Captain returned on board

- Date
1. Malden Island. Uneventful.
  2. " " " " " " " " " " " "
  3. " " 08.52 Helicopter landed on with T.F.C.  
11.35 " " " " T.F.C. left ship  
12.05 Shackleton commenced leaf dropping practice  
(Exclusion zone).
  4. " " Uneventful
  5. " " Helicopter Norm off and on (17.35 to 17.50)
  6. " " " S " " " " (10.03 to 10.40)
  7. " " 10.30 Captain proceeded ashore.  
12.30 " returned aboard with [REDACTED]  
15.10 Flew off helicopter.  
15.50 Landed on [REDACTED]
  8. " " 08.55 [REDACTED] and [REDACTED] proceeded ashore Shelter and  
cement mining parties landed.  
10.10 Warrior sighted  
10.31 Helicopter took off.  
10.47 " landed. Helicopter took off with Ships Flight  
12.45 Warrior transfers fuel.  
17.44 Helicopter landed with mail 17.46 Helicopter took off.
  9. " " 09.00 Commodore Grapple Sq. and staff come aboard  
11.10 " " " " left.  
14.07 - 14.42 Helicopter on and off.
  10. " " 09.07 DUKW left with breakfast for shore
  11. At Sea. Helicopters active. T.F.C. and AVM Lees come and go.  
13.09 Flew off helicopter with No. 3 Re-entry team.  
17.40 LCM returned from Messina with stores
  12. Malden Island Uneventful. (? Whitsunday?)
  13. " " 09.00 [REDACTED] on board
  14. " " Prepare for D-Day.  
16.45 Bow doors opened.  
17.10 DUKW (A) swam into tank space  
18.45 " (B) " " " "  
18.50 Closed bow doors.  
Helicopters flown on and off. (3 off).
  15. At Sea. D-Day.

For details see next page

Date.

15 At Sea 08.08 Helicopter landed on 08.09 Helicopter took off.  
 08.44 " " " T.F.C. party arrived on board  
 08.45 " took off  
 10.37 Megaton Bomb fired.  
 11.04 Helicopter landed on  
 11.14 " took off with T.F.C. and party.  
 11.18 " landed on  
 11.21 " took off  
 11.30 " landed on  
 11.33 " took off  
 12.10 " landed on 12.15 Helicopter took off  
 12.34 " " "  
 12.35 " left ship with [redacted].  
 14.22 " landed on with contaminated re-entry team  
 14.30 " took off.  
 14.32 " landed on with contaminated re-entry team  
 14.48 " took off  
 15.35 " landed on with contaminated re-entry team.  
 15.41 " took off  
 15.44 " landed on with contaminated re-entry team.  
 16.05 Port watch washing down decks  
 16.37 Helicopter took off.

16 Maldon Island 08.10 Helicopter landed  
 08.13 " took off with survey party  
 09.06 " landed 09.08 Helicopter took off.  
 09.15 " landed 09.16 " " "  
 09.30 2 DUKW's swam out. Bow doors closed.  
 Island declared clear of contamination.  
 09.52 Helicopter landed on 09.56 Helicopter took off,  
 09.59 " " " 10.25 " " "  
 11.26 " " " 12.05 " " "  
 12.30 [redacted] Sci. Director arrived on board  
 13.30 [redacted] working Party landed.  
 19.00 Nessina sailed  
 21.00 Warrior sailed.

17 " " Helicopters on and off.  
 14.00 Starboard watch landed to assist in erecting camp  
 16.30 " " of the hands returned on board.

18 " " 08.15 Stern anchor lost.

Date.

- 19 Malden Island 14.10 LCM left for shore with libertymen and sports teams  
 14.20 " secured alongside  
 16.05 " left for shore with libertymen and sports teams  
 (Sunday) 16.20 " secured alongside  
 18.55 " left for shore  
 19.15 " in difficulties getting off the beach  
 20.00 Libertymen disembarked to spend the night on shore  
 21.30 LCM moved clear of the reef and secured to a bulldozer for the night.
- 20 " " 08.00 Captain returned on board, DUKW's commenced ferrying libertymen on board.  
 Helicopters down on and off.
- 21 " " Uneventful
- 22 " " "
- 23 " " 15.00 Helicopter landed on with one sick rating.
- 24 " " Bad weather, proceed to sea.
- 25 " " Weather improves. Helicopters on and off.
- 26 " " Uneventful. (Sunday)
- 27 " " 14.50 Captain left for Warrior.  
 15.30 " returned by DUKW Helicopters on and off.  
 16.40 Commodore arrived on board  
 18.25 " left.
- 28 " " 15.30 Messina slipped. Helicopters on and off.
- 29 " " Uneventful. Warrior present " " " "
- 30 " " 16.30 Bow doors opened  
 16.40 Swam in DUKW.  
 18.50 " " "  
 21.53 Slipped and proceeded.  
 22.52 Pukaki close astern  
 23.55 Transferred scientific equipment from Pukaki.
- 31 " " Round 2.  
 and at sea.  
 For details see next page

Date

31 Malden Island 08.12 Helicopter landed on 08.13 Helicopter took off.  
 08.34 " " " 08.55 " " "  
 or at sea 10.42 Weapon fired (OH)  
 11.16 Helicopter landed on 11.17 " " "  
 11.32 " " " 11.33 " " "  
 11.42 " " " 11.42 1/2 " " "  
 12.18 " " " ? ?  
 13.20 Sighted Malden. bearing 185 NE point  
 " 217 NW "  
 14.32 Helicopter landed on 14.40 Helicopter took off  
 14.50 " " " 14.52 " " " with  
 D.T.F.C. and Mr. Cook  
 14.53 " " " with evacuation team 2  
 15.02 " took off.  
 15.10 " landed on 15.17 Helicopter took off  
 15.22 " " with evacuation team 3  
 15.27 " took off  
 15.29 " landed on 15.30 Helicopter took off.  
~~15.32~~





Date	To	[Redacted]	Leave
10.	To Malden	[Redacted]	NIL
11.	09.10 Sighted Warrior 10.05 Fueling 16.09 " completed 16.44 Sighted Malden 17.47 Messina passed to port 18.00 Shackled on.	[Redacted]	NIL
12	13:15 LCP lowered.	[Redacted]	PE Watch 16:30 - 19:00 Watch Keegan's from 14:00
13.	To position for flying off Met Ballons	[Redacted]	By night. 17:00 - 08:00
14.	_____	[Redacted]	PE Watch 16:00 - 19:00 Night by night.
15.	17:00 Warrior arrives	[Redacted]	Std Watch 16:30 - 19:00 Watch Keegan's from 14:00
16.	To position for flying off Met Ballons Helicopters on at aft	[Redacted]	PE Watch 16:30 - 19:00
17.	07:15 Messina arrives 13:00 ACM for Messina with stores 16:45 " returns	[Redacted]	Std Watch 16:00 - 19:00 Night by night.
18	16:00 LCP hoisted 16:30 Captain proceeded ashore 16:45 No 1 DURW swim aboard 17:55 No 2 " " " Captain aboard 20:54 Slipped and proceeded	[Redacted]	NIL
19.	00:10 Met ballons released. 08:30 DC state 1A 09:15 Hands to stations for witnessing burst. 10:40 Weapon fired over Malden. 11:07 DC state 1B 12:52 " 3 13:10 Sighted Malden 13:21 Mr Cook at TFC left by helicopter	[Redacted]	NIL

Date

Leave

19 (cont) 15:00 Port Watch fall in SSD close up  
Assume DC Stds 2

15:21 Seaboot slipped with buoy jumpers

15:39 Shackled on one side

15:35 Hoisted onto moving buoy.

18:00 Captain to Warrior

20:10 " returned

20 (cont) 08:25 2 DUKWs swam out

08:20 Bow doors open

14:00 Warrior sailed

18:00 Bow doors closed

20:00 Messina sighted

[REDACTED] for bathing to PE Watch  
16:30 - 19:00

21. 10:30 Bow doors opened

12:45 Capt left for Ch. Is.

17:00 Bow doors closed

19:15 LCP moved astern

[REDACTED] Stbd Watch 16:30 - 18:30  
Normal watchkeeper's leave

22 10:45 Bow doors opened

13:15 Stbd watch stowing cargo

17:15 Bow doors closed

[REDACTED] PE Watch 16:30 - 19:00  
Watchkeeper's 16:30 - 19:00  
Night leave by request  
to OOD

23 07:30 Both watches embarking cargo

14:00 Capt from Ch. Is.

[REDACTED] Stbd Watch 16:30 - 19:00  
Night leave by request

24 07:30 Restowing cargo

13:15 LCP hoisted

[REDACTED] PE Watch 16:30 - 19:00  
Night leave by request

25 13:15 Embarking stores

[REDACTED] Stbd Watch 16:30 - 19:00  
Night leave by request

26 07:30 POS of embarking stores

07:50 Motor cutter lowered

14:00 Beach working party landed

[REDACTED] PE Watch 16:30 - 19:00  
night leave by request

27 07:30 Embarking cargo

[REDACTED] Stbd watch 17:00 - 19:00  
Bathing only

28 07:30 loading HWRP of  
Army stores

09:00 Messina sighted

[REDACTED] PE Watch 17:00 - 19:00

Date  
28 (cont) 1600 Proceeded to anchorage

Leave

29 08:30 Salvicor sighted  
10:20 Court of enquiry into  
loss of stern anchor  
12:10 Court of enquiry ended



Stand with 13:30-19:00

30. 16:45 Messina slipped and proceeded.

17:00 LCM hoisted inboard

17:25 Weighed and proceeded

18:45 Opened bow doors

19:15 DOKW swam in

19:30 Ramp raised

20:00 Proceeded MALDEN in company with Messina

21:52 Bow doors secured



NIL

Reply to: [REDACTED]  
Direct Dial: 0118 982 5625  
Direct Fax: 0118 982 5796  
Our Ref.: AWE/HPRK/B/LET/NRPBNRRW/03/062001  
Your Ref.: B1050/04 dated 20 June 2001

To: [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

27 June 2001

[REDACTED],  
You recently wrote to [REDACTED] for clarification of information in the 'Blue Book' entries for [REDACTED] and [REDACTED], and I am replying on his behalf.

I have examined the original Health Physics records on which the 'Blue Books' were based and have confirmed that there were two [REDACTED], on HMS Narvik who were issued with film badges as part of the general issue to the ships company. These were numbered 366 (W) and 367 (T) and would have been logged as background readings or zero.

There are also records showing the issue of three consecutive daily film badges (numbered 2491, 2588 and 2618) to a [REDACTED] which confirm a total dose of 1.99 "r", but there is no evidence on the issue sheets to confirm the identity of the recipient as [REDACTED]. There is a possibility that these may not all have been issued to the same person. From the article, the description of [REDACTED] duties after the explosion would indicate that he was the likely user of the three daily issues of dosimetry, which were 18 to 20 days after the test.

Subsequent hand-written annotations on other total dose record sheets were made as additional information was obtained from various sources on the identity of personnel, probably at the time of preparation of the 'Blue Books'. The entry for [REDACTED] is hand-written as W (only one is listed as the other's dose would be assumed to be zero). The source of this information or the identity of the editor is not given.

My conclusion is that unless other information is found, (e.g. from Army records) on the movements of [REDACTED] and [REDACTED] which can confirm [REDACTED] as the only possible recipient of film badges on the dates issued, and ref [REDACTED] information, then this is the most likely to be correct. Presumably [REDACTED] was present when the doses were entered in his Paybook and can confirm this and other details.

The 'Blue Book' information does carry a warning that "the listing is not claimed to be free of errors, incorrect assertions or omissions etc. as the information available was sparse, of very varied quality and often ambiguous or indeterminate".

If you need any further information or have any query please contact me at the above address:

Yours sincerely

[REDACTED]  
[REDACTED]

# ADS Ad Hoc Requests Log



Ref No:  Date:  Logged B

Originator:  Contact Address:  address as

Request:  , dose believed incorrectly assigned to .

Action:

Actioned  prox Hrs:  Date Closed:

Follow Up Action:



National Radiological Protection Board, Chilton, Didcot, Oxon OX11 0RQ.  
Tel: (01235) 831600 - Fax: (01235) 833891 - E-mail: nrpb@nrpb.org.uk

[Redacted]

AWE Company Health Assurance Team  
AWE  
Aldermaston  
READING  
RG7 4PR

Our ref: B1050/04

20 June 2001

[Redacted]

**Study of UK Participants in the UK Atmospheric Nuclear Weapons Tests**

I hope you can help with an enquiry regarding the dose records for a member of our epidemiological study. This enquiry has arisen from a newspaper article that has been brought to our attention (see attached). In the article [Redacted] claims that he has a record that he was exposed to 1.99 roentgens of radiation.

However, I have checked our database record for [Redacted] (a good match for his details was found on our databases) and no dose has been reported for him. The Blue Book entry for [Redacted], which is the basis of the information on our database, also has no record of a dose (see attached, under [Redacted]). However, interestingly, the neighbouring entry in the book for [Redacted] has a dose of 1990 millirem, the dose [Redacted] claims to have.

So it looks like there is the possibility of some sort of mix-up, either on the [Redacted] the Blue Books. In order to ensure that we have the [Redacted] study, I would be grateful if you would investigate whether Wilson W have been correctly recorded.

Please do not hesitate to contact me if you have any queries.

AH 01073.  
Also logged in TV log

Yours sincerely

[Redacted signature block]

check for army 30

Name	Rank	Total Dosage Received	Highest Single Dose	Daily Average	Daily Average over 4 weeks
		0.75	0.68	0.325	0.03
		1.10	1.10	1.10	0.04
		3.04	1.35	0.203	0.15
		0.18	0.12	0.09	<.02
		0.75	0.25	0.107	0.03
		1.65	1.25	0.206	0.06
		<.02	<.02	<.02	<.02
		0.60	0.60	0.60	0.02
		1.33	1.20	0.095	0.05
		0.37	0.37	0.37	<.02
		1.01	0.41	0.252	0.04
		0.05	0.05	0.003	<.02
		0.1	0.10	0.006	<.02
		1.45	1.45	1.45	0.05
		0.23	0.10	0.011	<.02
		0.15	0.15	0.15	<.02
		2.30	1.85	0.287	0.08
		0.56	0.33	0.14	<.02
		<.02	<.02	<.02	<.02
		2.85	2.85	2.85	0.10
		0.07	0.07	0.07	<.02
		1.90	1.80	0.16	0.07
		0.76	0.70	0.38	0.03
		<.02	<.02	<.02	<.02
		0.60	0.30	0.06	0.02
		3.20	1.50	0.19	0.11
		0.13	0.08	0.014	<.02
		3.88	1.35	0.204	0.14
		4.75	2.50	0.317	0.17
		1.90	1.90	1.90	0.07
		0.43	0.43	0.43	<.02
		0.24	0.18	0.016	<.02
		1.99	1.55	0.663	0.07
		0.41	0.32	0.14	<.02
		<.02	<.02	<.02	<.02
		0.42	0.23	0.022	<.02
		0.06	0.06	0.06	<.02
		0.33	0.27	0.02	<.02

The "daily average" is calculated from the day radiation was first received until the final measurement.

In some cases the total dosage was received as the result of one sortie, the "average" has then been quoted on one day only. This gives a false impression so I have included a "daily average" for a 4 week period beginning D-day.



Record of film badge  
issues to <sup>Army</sup> personnel  
on board HMS Narvik

[Redacted] - no int

film No 2610  
D day +20 1.55 r.

23.10.52

b.no-2491  
D day +18 0.16 r

b no 2588  
D day +19 0.28 r

1.99

[Redacted] 2523189 (367)  
film 366 on Narvik

Zeebrugge  
Narvik



## HEALTH PHYSICS GROUP

## PERSONNEL MONITORING (FILM)

D-18 decayDATE: 7.10.52

Film No.	Name	Period of exposure	Density		Dosage <sup>hr</sup>
			Unsh.	Filter	
2490			0.41	0.20	0.15
2491			0.50	0.23	0.16
2492			0.46	0.24	0.16
2493			0.44	0.23	0.16
2494			1.52	1.02	0.86
2495			1.32	0.92	0.76
2496			0.41	0.23	0.16
2497			1.46	0.96	0.80
2498			1.53	1.05	0.90
2499			1.78	1.20	1.10

HEALTH PHYSICS GROUP  
PERSONNEL MONITORING (FILM)

D+19 days.

DATE: 27.10.52

Film No.	Name	Period of exposure	Density		Dosage "r"
			Unsh.	Filter	
2580			1.47	0.85	0.70
2581			3.17	2.40	3.10
2582			3.00	2.27	2.80
2583			3.07	2.43	3.20
2584			0.18	0.10	0.08
2585			-	-	-
2586			0.19	0.11	0.09
2587			0.15	0.07	0.06
2588			0.71	0.39	0.28
2589			1.47	0.93	0.78

## HEALTH PHYSICS GROUP

## PERSONNEL MONITORING (FILM)

DATE: 73.10.52

HEALTH AND SAFETY : IN CONFIDENCE

Film No.	Name	Period of exposure	Density		Dosage "r"	
			Unsh.	Filter		
2010			-	-	-	
2011			-	-	-	
2012			-	-	-	
2013			-	-	-	
2014			-	-	-	
2015			2.15	1.48	1.40	
2016			0.98	0.60	0.47	N.W. IS.
2017			<del>2.59</del> 1.82	1.82	1.80	
2018			2.30	1.51	1.40	
2019			2.45	1.69	1.55	
2010			2.28	1.55	1.45	

28.2.1952,  
JAF/JJG.

AWE

JOB #407

DATE	TIME	TO/FROM	MODE	MIN/SEC	PGS	STATUS
001	3/11 15:37	0171 218 1769	EC--S	01' 01"	003	OK

TIME RECEIVED:  
DATE:

[REDACTED]

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**FACSIMILE LEADER SHEET**

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Message :

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Here is the document we spoke about.

[REDACTED]

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ARC 558

APPENDIX C

4th March, 1958.

SHIPMENT OF RADIO ACTIVE STORES

Confirming my recent telephone conversation with [REDACTED] the Deputy Director of Lighthouses and Navigation (S.A.), from whom prior authority must be obtained to ship radio active materials from South Australian Ports, has agreed to the use of a Standard form of application (a supply of which is enclosed) for authority to ship such stores.

If you will arrange for the completion of this form in triplicate in every case and send the completed forms to me, I will arrange for the necessary clearance. [REDACTED], Stores and Transport Branch, Finsbury North will on request arrange shipping space to enable items 1 and 2 of the form to be completed.

The following overriding dosage limitations should of course be taken into account.

- (a) For material emitting gamma rays only, or gamma rays and electrically charged corpuscular rays (alpha and beta rays) the gamma radiation at the surface of the package must not exceed 200 milliroentgens per hour and at a distance of one meter from the centre of the package in any direction 10 milliroentgens per hour.
- (b) For materials emitting neutrons alone or with other radiations, only one fifth of the rates of dosage are allowed, measured as a physical equivalent of gamma radiation.

Will you please arrange for completion of these forms in relation to the two engines referred to in your letter to me dated 24th January, 1958.

SIGNED [REDACTED]

BL 0. 2/3 25/1/55

Minor trials: maralinga Page 1 of 4 pages

V. Miller 0310 177

Appendix 'A' to RAF/AWRE/TS.1276  
Dated 14th May, 1956

Instructions to Escorts Travelling with  
Consignments of Radioactive Stores

Introduction

1. The instructions contained in this Appendix are for the guidance of R.A.F. Officers acting as the Scientific and Security Escort for radioactive stores being transported from the U.K. to Atomic Weapon Trials Sites.
2. Because of the safety and security problems involved in the movement of these stores, each consignment will be accompanied throughout its journey to the Trial Area by an R.A.F. Officer from the R.A.F./A.W.R.E. staff.

Nature of Consignments

3. The stores will consist of radioactive sources, explosive charges and other equipment. The escort will be verbally briefed by [REDACTED], S.S.R.D., on the day prior to departure from A.W.R.E. as to the nature of the R.A. sources and their strength.

Temperature Limitations

4. The ambient temperature in the vicinity of the R.A. stores is not to exceed 105°F. Should a rise in temperature to this level appear imminent the escort is to take such steps as he may think necessary to keep the cargo cool.

Responsibilities of the Escort

5. The escort will be responsible for collecting the radioactive cargo from the 4 division of A.W.R.E., Aldermaston and escorting it to Maralinga. At Maralinga he will hand over responsibility for the cargo to an A.W.R.E. representative. During the flight he will be responsible for Radiological Safety and this responsibility will involve a regular series of monitoring measurements while airborne. If it is necessary to put the equipment in transit stores, the escort will establish the radiation levels round the point of storage at least as frequently as once per day. The escort will be responsible for indicating to the proper authority any precautions which should be taken to ensure that unauthorised personnel and photographic film are not accidentally exposed to the radiations.
6. The escort will be responsible for all aspects of security throughout the journey from Aldermaston to Maralinga and until the cargo is handed over to the A.W.R.E. representative mentioned in para.4. He will be responsible for making the necessary arrangements with R.A.F. Lyneham and S.S.T.D. for the delivery of the cargo to R.A.F. Lyneham at the times required.

Radiation levels - Maximum permissible levels.

7. The radioactive cargo will be in sealed containers which effectively prevent the spread of radioactive contamination. The maximum permissible levels of radiation are as follows:-

(a) Gamma Radiation. The Internationally agreed exposure to gamma radiation is 0.3 rontgens (r)/week (i.e. 300 mr/week). It is permissible to increase this dose rate providing the total dose received in any 10 week period does not exceed 10 times the weekly dose. (i.e. 3.0r)

(b) Neutron Radiation. The Internationally agreed exposure to external neutron radiation is 0.03 rad/week. (i.e. 30 millirad (m.rad)/week). It is permissible to increase this dose rate, providing the total dose received in any 10 week period does not exceed 10 times the weekly dose. (i.e. 300 m.rad).

2213

Classification	[REDACTED]
Descriptor	[REDACTED]
Covering	[REDACTED]

F Sigs 927  
(int.9/92)

# Facsimile Transmission Cover Sheet

Transmission Details		Document Details	
Serial Number:	Date and time of transmission: 08/03/02	Reference: D/ACSA(N)/15/8/3	
From: [REDACTED]	Fax Number: 02072181769	Subject: The port of <i>Cedna</i> <i>Cedana</i>	
[REDACTED] ADS A89 Ex4494	Fax Number:		
		Total Number of pages including this cover sheet	1+1

Authorising Officer	Transmit Operators
Rank, Name and Appointment:	Rank/grade and Name:
Signature: [REDACTED]	Signature:

Message/Remarks:

[REDACTED]

See attached fax from Aus. Can you see if there is any record of the use of this port?  
The line will be that all moves of RA materials in and out of Maralinga were in accordance with International packaging standards, so there would have been no contamination on route.

[REDACTED]

Covering	[REDACTED]
Descriptor	[REDACTED]
Classification	[REDACTED]



## DEPARTMENT OF DEFENCE

DEFENCE SCIENCE AND TECHNOLOGY ORGANISATION

British Defence Research and Support Staff  
R1-6-A022

Precedence: PRIORITY	Date: 8 March 2002	Reference: BDRSS/7/300
To: [REDACTED] ACSA(N) Sc(Nuc)2	Fax No: 207 218 1769	Contact Phone No: 81769MB
From: [REDACTED]	No of pages Including this page: 1	Phone No: (02) 6265 7291 Phone (home) (02) 62627385 (0900-1100 GMT) Fax No: (02) 6265 7290 Email: [REDACTED]

**Ceduna contamination**

I would be grateful for some assistance on an issue that has arisen here, related to Maralinga.

The Deputy High Commissioner was approached (aka harassed) during an official engagement by an Australian lady about the town of Ceduna and its contamination by radiation related to the Maralinga trials.

Her contention is that equipment, vehicles, spoil etc (exactly what is unclear, but she quoted item(s) the size of a "basketball stadium") was transported from Maralinga after the trials to the town. As a result, there is a high incidence of cancer and the town is severely affected. She said that (unlike Maralinga) no studies have been conducted on Ceduna but that the UK Government should [fulfil its obligations].

We can find no mention of Ceduna in the Australian archives (and have no other knowledge of it). Looking at the map, Ceduna is a port of approx. 30,000 people, south east of Maralinga, (so it may be that material was transported away via the port?)

The DHC would like to reply within two weeks or so, if necessary with a holding reply. He would like to understand what is the basis for her contentions, what is the background to any such involvement of the town, have any relevant studies been conducted, etc. It would also be useful to have an MOD line to take.

I would be grateful if you would let me have your first reaction by next week (ie COP Thursday 14<sup>th</sup> March) by fax or email. Many thanks in anticipation.

Regards

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From: [REDACTED]



Ministry of Defence



MOD (96 305) 7607 ST

fax: 020 7305 6015

MOD (96 305) 6015 ST

CHOTS: D SEF Pol CESO(MOD)

Our reference

D SEF Pol/2/99

Date

30 July 2001

See Distribution

### CAMPAIGN FOR CHATHAM DOCKYARD RADIATION WORKERS

As you will know, I represented the Under Secretary of State for Defence at the recent Annual General Meeting of the Campaign for Chatham Dockyard Radiation workers, held on 13 July 2001. I was accompanied by [REDACTED] of my staff.

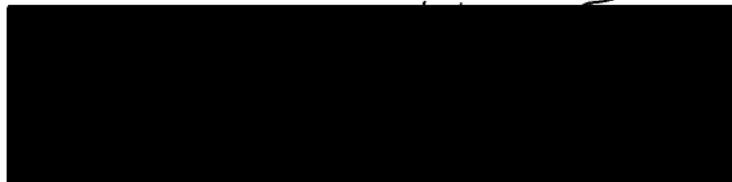
As well as the Chairman of the Campaign Group [REDACTED], a large percentage of the members were present, as well as the local [REDACTED]. [REDACTED] handled the meeting quite well and for the most part, the audience was courteous in its line of questioning. [REDACTED] played a constructive role in providing a "bridge" between the campaigners and myself and [REDACTED]. All in all, I believe we were given a good hearing.

I took the opportunity to update the meeting with currently available statistics for the Compensation Scheme. With reference in particular to Chatham cases, you will already know that two claims have been awaiting the determination of the amount of the final award of compensation since January of this year. [REDACTED] raised this matter in a written Parliamentary Question earlier this month. In his reply, the Under Secretary of State said that in an effort to move matters forward, MOD would be prepared to consider reasonable requests for interim payments of damages in both cases. I told the meeting that I would ask the Treasury Solicitor to contact the claimants' solicitor asking if they wished to apply for an interim payment on behalf of their clients. This has now been actioned and we await a response.

I also took the opportunity to tell the meeting that we already have work in hand to analyse all the cases where delay is occurring. The principal area of delay appears to be the claimant's solicitor not acting in a timely fashion. We hope to have a better idea of the scope and extent of the problem later in the year and I promised to bring the Campaign Group up-to-date with our findings in due course.

The last main point of note that arose was the provision of health screening for former Chatham Dockyard workers. I made no commitment on this, but said that I would take stock of the situation, although our medical advice, which is supported by the West Kent Health Authority, was that there was little benefit to be gained from regular health screening. I did mention that there is already a counselling service in place for ex-radiation workers.

Overall, as I have already mentioned, I believe we were given a good hearing, but it will be important that we are seen to have sorted out the interim payment situation, notwithstanding that the fault in these cases lies neither with MOD or the Treasury Solicitor.





Ministry of Defence



**DSEF**

DIRECTIONAL & SAFETY  
ENVIRONMENTAL & FIRE POLICY

Room 6/176

St Christopher House

90-114 Southwark Street

LONDON SE1 0TD

tel: 020 7305 7607

MOD (96 305) 7607 ST

fax: 020 7305 6015

MOD (96 305) 6015 ST

CHOTS: D SEF Pol CESO(MOD)

Our reference

D SEF Pol/2/99

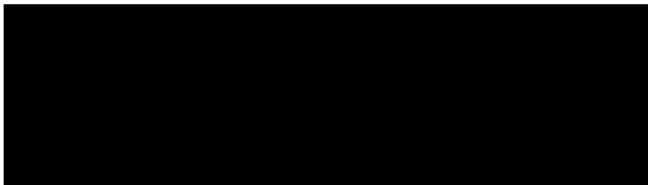
Date

30 July 2001

See Distribution

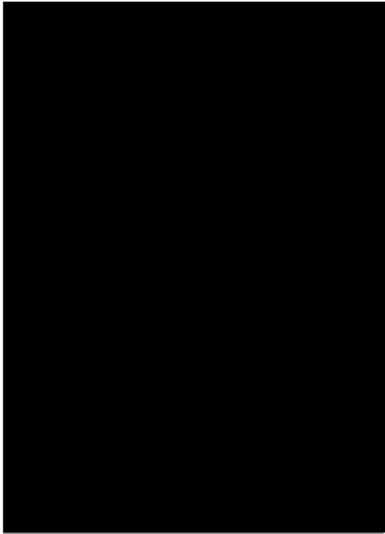
### WAR PENSIONS AGENCY

1. You may recall that at the last Management Board meeting in April of this year, an action was placed on me to draft a letter to the Department of Social Security to express the concerns of the Board about differences between the Compensation Scheme and awards made by the War Pensions Agency.
2. You may wish to note that in May 1999 we wrote to the DSS expressing concerns that pensions paid to members of the Armed Services on the basis of diseases that they have contracted, linked to occupational exposure to radiation whilst in MOD employment, may operate on significantly different criteria to the Compensation Scheme and indeed could undermine the Scheme itself.
3. I have discussed this issue with the Board Chairman and we both agree that this previous exchange of correspondence adequately address the points raised at the last Management Board meeting. Therefore, I enclose for your information a copy of earlier letters between MOD and the DSS.



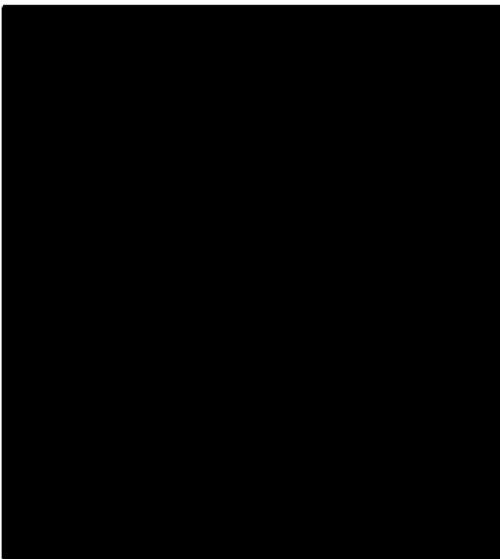
Encls.

Action addressees:



- Board Chairman
- Chief Environment and Safety Officer (MOD)
- Chief Claims Officer (MOD)
- DRPS/SPRA
- AWE, Manager Personnel Projects & Employee Relations
- AWE, Head of Health Effects
- IPMS
- TGWU
- AWE, Secretary Industrial Trade Union Side
- AWE, Chairman Non-Industrial Trade Union Side
- Compensation Scheme Executive Secretary (BNFL)
- Consultant Adviser to Trades Unions
- Board Secretary

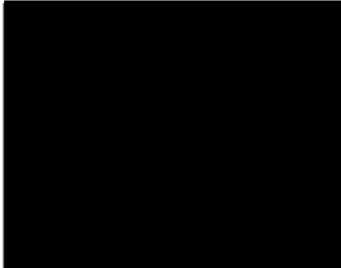
Information addressees:



- INM Alverstoke
- DRPS
- INM Alverstoke
- NBSA/SORP
- AD Med Pol (H&R) MOD
- AD Med Pol (H&R) MOD
- AWE, Senior Medical Officer
- Secretary, MOD Trades Union Side
- MOD Trades Union Side
- TGWU Legal Department
- MOD CCSU
- AWE, Non-Industrial Trades Union
- AWE, Non-Industrial Trades Union
- Aldermaston



**Ministry of Defence**  
**DIRECTORATE of SAFETY, ENVIRONMENT and FIRE POLICY**  
Room 749, St Giles Court, 1-13 St Giles High Street, London WC2H 8LH  
Fax: 0171 305 1144 Telephone: 0171 305 1182 (DDI)



Your reference:

Our reference:

D SEF Pol /16/13

Date: 11 May 1999

### WAR PENSION CLAIMS

1. The Directorate of Safety Environment and Fire Policy within the Ministry of Defence operate the MOD component of the Compensation Scheme for radiation linked diseases. The compensation scheme covers most of the UK nuclear industry and provides a means by which employees, present and past, can seek compensation for radiation linked diseases that they contract. This is a more generous alternative to seeking redress through the Courts and does not require negligence to be proven.
2. Concern has been expressed by members of the Compensation Scheme that war pensions paid to members of the Armed Services on the basis of diseases that they have contracted, linked to their occupational exposure to radiation while in MOD employment, may operate on significantly different criteria and could undermine the Compensation Scheme.
3. Our Chief Environment and Safety Officer has therefore asked me to contact your Agency to determine the criteria that you use. I have spoken to your administrative staff who have provided me with some information. This provides clear guidance on the treatment of nuclear test veterans but little for others, particularly submariners exposed to radiation as part of the Naval Nuclear Propulsion Programme. I have therefore been advised to write to you.
4. Would you therefore advise me of the criteria that you use to determine whether war pensions should be paid on the basis of radiation exposure and how the value of the pension is determined.
5. You will probably also be aware of the Industrial Injuries Advisory Council findings in Cm 4280 on the subject of Disease Induced by Ionising and Non-Ionising Radiation presented to Parliament in March 1999. Will the War Pensions Agency adopt the criteria it contains for future pension settlements for persons occupationally exposed to radiation in the Armed Services?
6. I look forward to hearing from you.

Yours sincerely,





DEPARTMENT OF SOCIAL SECURITY

██████████  
*Medical Policy Manager*

Room 6106, Norcross, Norcross Lane, Blackpool, Lancs FY5 3WP  
Tel: 01253 332582 Fax: 01253 330437

24 May 1999

██████████  
St Giles Court  
1-13 St Giles High Street  
LONDON  
WC2H 8LD

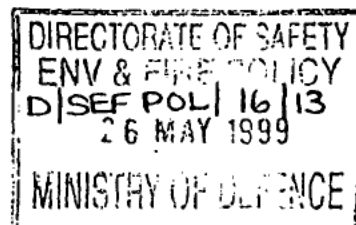
Dear ██████████

**War Pension Claims - Ionising Radiation Related**

Thank you for your note of 11 May 1999 and for discussing some of the issues in advance. I understand that your principal concern is the war pensions approach to service personnel who have potentially been exposed to excess ionising radiation in relation to their mainstream principal occupation eg submariners exposed to radiation as part of the Naval Nuclear Propulsion Programme. I note your use of the National Registry of Radiation Workers' Studies reports and would be most grateful if you could send me the recently published 2nd analysis - or failing that provide me with the reference.

You make reference in the note to the recent Industrial Injuries Advisory Council (IIAC) report on diseases induced by ionising and non-ionising radiation. As I explained I provide the DSS medical/scientific input to ionising radiation linked disease consideration both for Industrial Injuries and for War Pensions. You ask in the note if the War Pensions Scheme will be adopting the criteria recommended in the report for Industrial Injuries. The short answer as we discussed is "no". The introduction to the IIAC report sets out the basis used in prescribing diseases. One route to prescription is the existence of evidence that the risk of having the condition prescribed is doubled as a result of occupation. No such requirement is required for war pensions.

DSS is aware of the provisions of the BNFL Compensation Scheme for radiation linked diseases. In fact it was discussed in some detail during IIAC consideration of these conditions. We confirmed in our conversation that neither of the DSS schemes uses an individual case probability of causation calculation, which is the basis I understand, of the BNFL Scheme.



War pension may be claimed by anyone who has served in the armed forces at any time from service release. There is no list of prescribed or allowable conditions and the determination is an individual case consideration. Awards are made for any disablement which is causally linked to service.

The standard of proof in war pensions is not balance of probabilities or scientific proof. For claims made within 7 years of leaving service, entitlement is granted unless the Secretary of State can show beyond reasonable doubt that service has played no part in cause or course of the claimed condition. For claims made more than 7 years after leaving service, the onus is on the claimant who must raise by reliable evidence, a reasonable doubt that service has played a part in cause or course of the claimed condition.

In relation to the ionising radiation related claims you deal with, most cases - save a few with very long service - are dealt with under the "beyond 7 years" standard. This is because of the time course of carcinogenesis.

Where a cancer is claimed under the scheme, with the contention that service related ionising radiation exposure is causal, lay officers of the War Pensions Agency first of all determine whether or not exposure to excess ionising radiation is accepted as a service fact. This determination is informed by MoD dosimetry information. The Agency medical officer confirms the nature of the claimed disablement and whether or not it is generally accepted medically as being ionising radiation linked. Where the Secretary of State accepts service related excess exposure to ionising radiation and the condition is radiation linked an award will follow.

It is of course rare for that situation to occur at the first tier of adjudication. In most cases the SoS does not accept exposure to excess ionising radiation. Appeal rights, however, are notified with the decision and the man may pursue the case to the Pensions Appeal Tribunal. PATs are independent of this Department, belonging to the Lord Chancellor's Department. Their function is to re-visit the facts of the case and make a determination. Case law provides guidance on reliable evidence and reasonable doubt - but as we discussed there is opportunity at this stage for a Departmental rejection to be overturned. The Department can challenge PAT decisions to the High Court - but only on a point of law, not on matters of scientific or medical conflict. The subject of the health consequences of low dose ionising radiation is of course emotive and controversial. You can, however, be assured that it is the practice of this Department and Agency to proceed on information provided by the MoD.

Finally, we mentioned the activities of [REDACTED]. I note that you are aware of her paper. Clearly the findings are not unique to nuclear test veterans. We already know of representations she has made on behalf of non-test veterans, citing her report. It will be our intention as a Department to refute her findings based on evidence.

In summary

- i. the provisions of the War Pensions Scheme are very different from other compensation schemes, civil litigation and from the Industrial Injuries Scheme

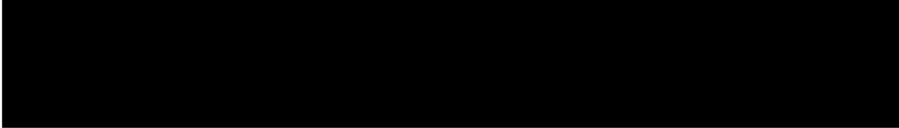
ii. the principal difference lies in the standard of proof which is more generous than balance of probabilities. In addition determinations are made on an individual basis

iii. war pensions decisions in these cases - particularly Secretary of State's acceptance of service related ionising radiation exposure - are informed by MoD dosimetry data


iv. the Pensions Appeals Tribunals are independent and part of the Lord Chancellor's Department not the DSS

Hope this is helpful. Happy to provide any further information as required.

Yours sincerely



Medical Policy Manager







[REDACTED]  
 Ministry of Defence Main Building  
 Whitehall  
 LONDON  
 SW1A 2HB

Telephone: MOD Network Exchange: Main Building  
 Direct Dialling (0207-218)  
 Tel Extn: 7379 Fax Extn: 1769

[REDACTED]  
 Medical Policy Manager  
 WPA

Your Reference: Letter of 6<sup>th</sup> March 01

Our Reference: D/ACSA(N)/15/8/2

Date: 04/05/01

#### WAR PENSION CLAIMS AND APPEALS – MOD AND AWE ASSISTANCE

Following my letter of 17 April I have had some discussions with AWE and INM, and [REDACTED] has spoken to [REDACTED]

In the first place I would wish to let you know about some changes at AWE. The support we have from AWE has suffered a set back for [REDACTED] has recently been taken ill and is now on long term sick leave. His place has been taken by a [REDACTED] who has a steep leaning curve to climb. AWE will continue to provide the service to the WPA under the SLA and the provision of information relating to the conduct of tests etc in support of WPA cases. Not with standing this difficulty they have confirmed, much as I expected, that it will be difficult for them to accept additional tasks such as supporting appeal hearings.

However on a more positive note [REDACTED] has confirmed that INM is willing for him to provide some support to the medical issues in appeal. I believe this be could handled on an informal basis for a test case with time and T&S costs being borne by INM. For it to become a regular commitment would require some formal request tasking, acceptance and possibly budget adjustments. The question of independence of course arises and [REDACTED] has suggested the names of two retired doctors (one ex AWE , one ex service ) who might wish to considered, their details are attached.

[REDACTED] tells me that [REDACTED] sees it as quite appropriate that NRPB should provide advice to the WPA, but I am not sure they appreciate the potential workload nor was were there any mention of the charges they might make for this! I believe their strengths will be in epidemiology and this might well extend to the issue of probability of causation. I think I must leave it with you to explore this with them.

[REDACTED]

1

Post-it Notes 7669	To: [REDACTED]	→ Telefax
	Fax: [REDACTED]	
	From: [REDACTED]	Pages: 3
	Date: [REDACTED]	

I am disappointed that we have not been able to find one person who could handle the range of issues that come up at these cases but I do hope you can make some use of INM and perhaps NRPB to try and redress the balance at the appeal hearings.



Copy :



Annex A to  
INM 252/133  
dated 01 May 2001

DETAILS OF MEDICAL PRACTITIONERS WITH RADIATION BACKGROUNDS

1. There are two doctors whom we discussed and thought suitable in terms of background and experience notwithstanding their former affiliations:

a.



Reading



Tel/Fax:

0118 9700021

E-mail:



Former posts include Medical Adviser to AWRE (as it then was) and Senior Medical Officer at BNFL; he was also a Surgeon Commander, Royal Naval Reserve. Currently semi-retired.

b.



01983 568076

Served previously in royal navy and subsequently, until 1994, in the Royal Air Force; more recently employed at REAC/TS at oak Ridge, TN. Currently looking for employment.

2. We also discussed a further batch and decided, as I recall, to hold their names in abeyance, meanwhile. They also have affiliations which might be used to call into question their independence but, inevitably those with the knowledge and experience will have gained it in the nuclear industry.

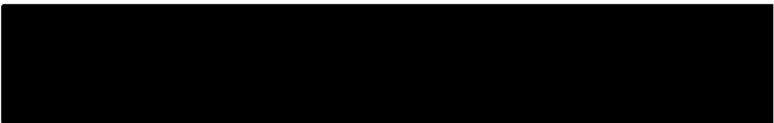


A sequence of correspondence  
on the MOD provision of 'expert  
witnesses' for PAT hearings.  
Just for information!



27/4/01

M - For MFD



Ministry of Defence Main Building  
Whitehall  
LONDON  
SW1A 2HB

Telephone: MOD Network Exchange: Main Building  
Direct Dialling (0171-218)  
Tel Extn: 7379 Fax Extn: 7400

Your Reference:

Medical Policy Manager

DSS

WPA

Norcross Blackpool FY5 3WP

Our Reference: D/ACSA(N)/15/8/2

Date: 26/01/01

THE [REDACTED] CASE & [REDACTED] CASE CORRESPONDENCE

Thank you for copying me the papers on [REDACTED] and the lost [REDACTED] appeal that you have directed to AWE. The [REDACTED] case appeal report by the chairman [REDACTED] is concerning as it appears to indicate a disregarding of the 1993 NRPB report conclusions on MM. Neither does there appear to have been any argument on probability of radiation causation put, not that this alone would have changed anything.

I have to say that I am coming to the opinion that if appellants are routinely going to use a solicitor then we will find it increasingly difficult to convince the PAT of our view in many of these appeals. The wording in the WPA legislation taken together with the normal scientific terminology used in radiobiological matters and health effects means that doubt can always be established and the decision will come down to even more subjective topic of what is reasonable evidence.

We, or more accurately AWE, have provided general and case specific briefs for the PAT and for your case officers and we will continue to adapt these to suite the evolving situation. My belief is that we must however try and put stronger arguments to the PAT at the hearing, which regardless of their knowledge will make them take a more balanced view of the appellant councils statements. To achieve this I would like to suggest that, given AWE agreement, we meet with your case officers for face to face discussions prior to an appeal hearing, we might even persuade the NRPB to participate. Would you like to give this a try?



*We spoke, you might speak to him to make sure he has no problem with the*

6 March 2001

[REDACTED]

MoD Main Building  
Whitehall  
London  
SW1A 2HB

Dear

ex-AC1 [REDACTED]

Many thanks for your recent letters and your useful comments on the recent cases lost at PAT.

I write because I have at last had opportunity to speak to [REDACTED] and other admin colleagues about your kind offer of some MoD/AWE input to some selected PAT ionising radiation cases. As you know we have been monitoring the progress of files at Tribunal and have identified one or two recurring themes with which your help would be invaluable. In particular there is a tendency to question:

- any MoD/AWE evidence because of the lack of dosimeters
- read AWE Technical Notes etc in a highly selective way, ignoring conclusions
- raise the issue of alpha irradiation
- push hard the no threshold dose carcinogen effect.

I have taken on board your helpful comments on the Policy Statement. The remaining area which I think we need to beef up is the probability of cancer induction at the levels of radiation experienced in the tests. Even with such a low standard of proof as war pensions it seems inappropriate that PAT should simply equate any exposure to ionising radiation as raising a reasonable doubt of carcinogen potential. I would value your help with this given the innate uncertainty of the models and lack of empirical estimates.

You had kindly suggested that MoD/AWE colleagues might brief the Agency's Departmental Reps ahead of Tribunal. Although we fully understand the resource implications – that we wonder if it might be better for colleagues to act as expert witnesses. A real issue at Tribunal is we feel the sheer bulk of evidence and members' lack of familiarity with the technical aspects. If someone trained in dosimetry/radiobiology could help guide the Tribunal through the technical material that would be invaluable.

The rules of Tribunal procedure are fairly informal and not strictly as in civil law. If either side wants to call expert witnesses, permission from the Tribunal chairman and notice needs to be given. Once there the person may be questioned by a Tribunal member, the appellant's rep and the Departmental Representative.

We would of course not wish to take this action routinely, but think it would be well worth trying in a few high profile cases – perhaps where [REDACTED] is involved.

By chance the [REDACTED] case is being re-heard in the next few months. [REDACTED] will be there and AWE colleagues (including [REDACTED] and most recently [REDACTED] have both provided useful evidence. [REDACTED] has subsequently introduced and criticised the 1993 Technical Note.

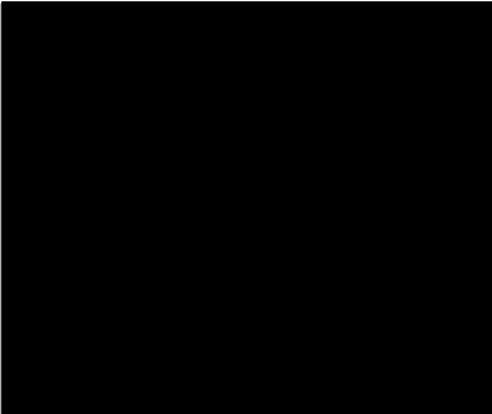
It seems an excellent test case. The only downside is that it is a Scottish case - to be heard in Edinburgh. The Scottish and England and Wales are different jurisdictions and we could not have it relocated. I understand that the hearing is likely to be listed for one whole day.

Could you please let me know your reaction to this? If appropriate, we could then arrange distribution of information and a briefing meeting to include the Departmental Representative.

I look forward to your views.

Kind regards,

Yours sincerely



Classification	[REDACTED]
Descriptor	[REDACTED]
Covering	[REDACTED]

F Sigs 927  
(int.9/92)

# Facsimile Transmission Cover Sheet

Transmission Details		Document Details
Serial Number:	Date and time of transmission: 04/12/00 12:55	Reference: D/ACSA(N)/15/8/3
From: [REDACTED]	Fax Number: 02072181769	Subject: [REDACTED]
[REDACTED]	Fax Number: 01253330437 01189 815320 02392504823 9 2 1 5 3 9 1 2 8 0 2 0 4	
		Total Number of pages including this cover sheet
		<b>3</b>

Authorising Officer	Transmit Operators
Rank, Name and Appointment:	Rank/grade and Name:
Signature:	Signature:

**Message/Remarks:**

All NOTE MY NEW (TO SOME) FAX NO

Attached is response to [REDACTED] recent? letter.

For [REDACTED]  
I copy you [REDACTED] letter (2 extra pages) and would appreciate your views on who within MOD might have right background to take on the technical advisor role at the [REDACTED] Appeal Hearing. I guess this would be a one off to judge whether it is worth the candle after which any subsequent representation will be subject to appropriate tasking and funding although where from is unclear to me.

[REDACTED]

Covering	[REDACTED]
Descriptor	[REDACTED]
Classification	[REDACTED]

[REDACTED]





[REDACTED]  
Ministry of Defence Main Building  
Whitehall  
LONDON  
SW1A 2HB

98 621

Telephone: MOD Network Exchange: Main Building  
Direct Dialling (0207-218)  
Tel Extn: 7379 Fax Extn: 1769

Your Reference: Letter of 6<sup>th</sup> March 01

[REDACTED]  
Medical Policy Manager

WPA

Our Reference: D/ACSA(N)/15/8/2

Date: 17/04/01

[REDACTED]

**WAR PENSION CLAIMS AND APPEALS – MOD AND AWE ASSISTANCE**

Thank you for your letter of 6<sup>th</sup> March, I apologise for not replying earlier but it arrived just as I went on leave and was then buried in my in tray.

I note the four areas where you would like some help and I am sure we can review the Policy Statement (PS) to see how we (MOD & AWE) can provide more guidance, perhaps you could re-circulate the PS for another review. We would gladly go over this guidance with those who have to use it.

Regardless of the quality of the guidance we provide the dynamics of appeal hearings will however always be a problem unless the WPA Departmental Representative can field the technical questions etc on the day. This is why I have always seen an expert advisor as the only response the WPA has to the NTVs current approach at appeals. I would agree with you that a radiobiological/ health physics professional (and not from MOD or AWE) would be the best approach, not that I can see NRPB wishing to be drawn into this. The only practicable approach may be for a MOD or AWE professional to be made available and whilst I believe there is an obligation on AWE to provide this support, in their current situation they may take some persuading. If you want representation at an Appeal Hearing rather than assistance prior to the hearing (and I am still not clear on this) we will need to consider who will take on the role very soon. You will see I have copied this to INM (with your letter) and this is in order to start some internal MOD debate on this issue.

You also mention beefing up the guidance on probability of causation and I agree there is a real point here. But in the face of your difficulties with the technical issues I would have to say that this would be best kept to the very basics. Going beyond the often quoted total life time cancer risk in the UK of  $5.9 \cdot 10^{-2}$  per Sv (or 1:16,000/mSv) might be counter productive as I believe it is a quite complex issue.

So in conclusion, if you want guidance for the WPA Representative I am sure AWE and we in MOD can handle this. However the issue of an expert witness at an Appeal Hearing is more difficult, independence from MOD would be preferable but unlikely and therefore I think we would need to get the possible MOD candidates together with yourself for a more detailed discussion. We will start to discuss this within MOD.

Incidentally I recently gave a presentation on NVTs to a MOD Management Panel for the Radiation Compensation Scheme and there was some concern expressed about the different approach adopted by the WPA and their science based arrangement.



Copy :



04 JUL 2001



PARLIAMENTARY UNDER-SECRETARY OF STATE  
FOR DEFENCE

MINISTRY OF DEFENCE

MAIN BUILDING WHITEHALL LONDON SW1A 2HB

Telephone (020) 7218 2216 (Direct Dialling)

(020) 7218 7610 (Fax)

(020) 7218 9000 (Switchboard)

D/US of S/LM 2081/01/Y

26<sup>th</sup> April 2001

Thank you for your letter of 9 April (reference: 3423) enclosing one from your constituent, [REDACTED] of [REDACTED]

[REDACTED] refers to my letter of 27 February sent to [REDACTED] of the British Nuclear Test Veterans Association (BNTVA) and challenges my statement that "those who took part in the UK's atmospheric test programme were not deliberately exposed to ionising radiation". He states that when he served on board HMS Narvik during Operation GRAPPLE, the crew was told to remain on the upper deck for up to four hours after the detonation and seeks an explanation for this.

The simple reason was that the crew were mustered on deck in order to enforce the procedure necessary to ensure their safety from the damaging effects of the initial light flash, which if viewed directly with the naked eye, could have caused permanent damage. All the details of what happened on board HMS Narvik at the time of the tests can be seen in the log books which are available at the Public Records Office (PRO). There are however no records of crew members being ordered to stay on the upper deck for a long period of time after the detonation, nor can I suggest why such an order would have been given. Of course mustering would have commenced well before detonation time and this might explain the thought that individuals were on deck for a long time.

Private Office

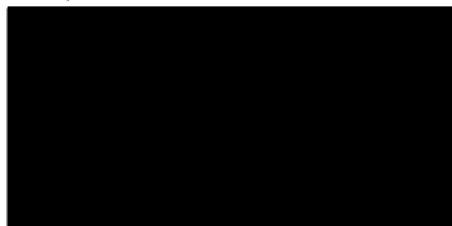




The crew of HMS Narvik was never at risk of radiation exposure as the ship was 44km from the third round and 46 kilometres from the first two in a north, north westerly direction in all three cases. There was never any danger of exposure to fallout nor, at this range, from prompt radiation.

With regards to the dummies that were used to study the blast effects on personnel; these trials were undertaken during the Buffalo series of tests in September/October 1956 at the Maralinga range in South Australia. No such trials were undertaken at the Malden or Christmas Island tests.

*Best wishes*



F A X M E S S A G E

Please Pass Quickly

Assistant Chief Scientific Advisor (Nuclear) Secretariat  
MINISTRY OF DEFENCE  
Main Building, Whitehall, London, SW1A 2HB.

ORIGINATORS NO: 020 7218-9435 FAX NO: 020 7218-1769

TOTAL PAGES (including this sheet) 5.. DATE:.....

TO: AINE.....ATTENTION: [REDACTED]...

M E S S A G E

RE: NUCLEAR TEST VETERAN LETTER

[REDACTED]

PSA letter from [REDACTED] and our previous letter to him.

If you can dig out any bits of Mrs Narvik's log books that we could send him to dismiss any fears he has, we would very much appreciate it.

Many thanks, [REDACTED]

[REDACTED]

PLEASE CONTACT IF ALL PAGES ARE NOT CORRECTLY RECEIVED

PostNet/Notes 7659	To: [REDACTED]	Telefax
	Fax: [REDACTED]	
	From: [REDACTED]	
	Date: [REDACTED]	Pages: <u>5</u>

3423/20

P/c.  
20/6  
[Redacted]

15th June 2001

[Redacted]  
House of Commons,  
London SW1A 0AA.

[Redacted]  
May I congratulate you on your re-election to serve as our member of parliament, especially as you managed to almost double your majority.

And thank you for your letter of 3rd May 2001, enclosing a letter from [Redacted] of the Ministry of Defence dated 26th April 2001, which I have perused with great interest.

The reason given " that the crew were mustered on deck in order to enforce the procedure necessary to ensure their safety from the damaging effects of the initial light flash " does not make any sense to most people. In their opinion they would have been better protected had they been below decks, especially as we had been informed during a briefing, prior to the tests, that radiation halved when passing through steel. So if the crew had been on the mess deck they would have been exposed to a lesser dose of radiation. ( or was this information untrue, like so much that we were told? )

[Redacted] states that according to the ships log book " there are however no records of crew members being ordered to stay on the upper deck for a long period of time after the detonation". He also states " of course mustering would have commenced well before detonation time ". Can we assume from this statement that there is also no record in the ships log book of the time that the ships company mustered on the flight deck ? This is truly unbelievable.

In fact the crew cleared lower decks at 0845.  
The Valiant bomber made its dummy run at about 0900.  
and the bomb went off at 0940 ( +/- 5 minutes for the 2nd & 3rd Test )

So [Redacted] speculation that " of course mustering would have commenced well before detonation time and this might explain the thought that individuals were on deck for a long time " is far from the truth.

I have made contact with 17 members of the "Narvik" ships company who were present at these tests. ( All that I have addresses for )  
9 were on duty after the tests. ( Engin Room, W/T office, Seaboat Crew, Etc )  
but 8 confirm that they were retained on the upper deck for a considerable time after the bombs were detonated.

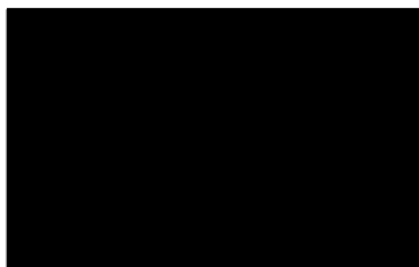
It is most unfortunate that [REDACTED] is unable to suggest why such an order would be given. I can assure him that the crew members who were retained on deck have no such problem.

Again he states that " The crew of HMS "Narvik" was never at risk of radiation exposure". I am reliable informed that radiation spreads from a detonation for a much greater distance than 44 Km.

Incidentally, it was most interesting to learn, after all this time, that we were so near to the detonation. Having been previously advised that we were between 32 & 38 nautical miles away.

The memory of half the crew can not be faulty, so I consider that the time has come for [REDACTED] to produce a copy of the ships log book for the days on which Graple 1, 2 & 3 were detonated, together with a copy of the ships daily orders, in the hope that we can discuss this matter on an even footing and perhaps resolve our differences.

Again thank you for your efforts on my behalf.



Classification	[REDACTED]
Descriptor	[REDACTED]
Covering	[REDACTED]

**F Sigs 927**  
(int.9/92)

# Facsimile Transmission Cover Sheet

Transmission Details		Document Details	
Serial Number:	Date and time of transmission: <b>08/03/02</b>	Reference: <b>D/ACSA(N)/15/8/3</b>	
From: [REDACTED]	Fax Number: <b>02072181769</b>	Subject: <b>The port of Cēdāna</b> <i>Cedana</i>	
[REDACTED] Ex4494	Fax Number:		
		Total Number of pages including this cover sheet	<b>1+1</b>

Authorising Officer	Transmit Operators
Rank, Name and Appointment:	Rank/grade and Name:
Signature: [REDACTED]	Signature:

**Message/Remarks:**

[REDACTED]

See attached fax from Aus. Can you see if there is any record of the use of this port?  
The line will be that all moves of RA materials in and out of Maralinga were in accordance with International packaging standards, so there would have been no contamination on route.

[REDACTED]

Covering	[REDACTED]
Descriptor	[REDACTED]
Classification	[REDACTED]

[REDACTED]





DEPARTMENT OF DEFENCE

DEFENCE SCIENCE AND TECHNOLOGY ORGANISATION

[REDACTED]  
British Defence Research and Support Staff  
R1-6-A022

Precedence: PRIORITY	Date: 8 March 2002	Reference: BDRSS/7/300
To: [REDACTED] ACSA(N) Sc(Nuc)2	Fax No: 207 218 1769	Contact Phone No: 81769MB
From: [REDACTED]	No of pages Including this page: 1	Phone No: (02) 6265 7291 Phone (home) (02) 62627385 (0900-1100 GMT) Fax No: (02) 6265 7290 Email: [REDACTED]

[REDACTED]

### Ceduna contamination

I would be grateful for some assistance on an issue that has arisen here, related to Maralinga.

The Deputy High Commissioner was approached (aka harassed) during an official engagement by an Australian lady about the town of Ceduna and its contamination by radiation related to the Maralinga trials.

Her contention is that equipment, vehicles, spoil etc (exactly what is unclear, but she quoted item(s) the size of a "basketball stadium") was transported from Maralinga after the trials to the town. As a result, there is a high incidence of cancer and the town is severely affected. She said that (unlike Maralinga) no studies have been conducted on Ceduna but that the UK Government should [fulfil its obligations].

We can find no mention of Ceduna in the Australian archives (and have no other knowledge of it). Looking at the map, Ceduna is a port of approx. 30,000 people, south east of Maralinga, (so it may be that material was transported away via the port?)

The DHC would like to reply within two weeks or so, if necessary with a holding reply. He would like to understand what is the basis for her contentions, what is the background to any such involvement of the town, have any relevant studies been conducted, etc. It would also be useful to have an MOD line to take.

I would be grateful if you would let me have your first reaction by next week (ie COP Thursday 14<sup>th</sup> March) by fax or email. Many thanks in anticipation.

Regards  
[REDACTED]

*IMPORTANT: This transmission is intended for the use of the addressee and may contain confidential or commercially valuable information. If you are not the intended recipient, you are notified that any use or dissemination of this communication is strictly prohibited. If you have received this transmission in error, please notify this Office immediately by telephone so that we can arrange for the return of the documents to us at no cost to you.*

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Descriptor	
Covering	

F Sigs 927  
(int.9/92)

# Facsimile Transmission Cover Sheet

Transmission Details		Document Details
Serial Number:	Date and time of transmission: 07/06/01	Reference: D/ACSA(N)/15/8/3
From: [REDACTED] [REDACTED] Ex4494	Fax Number: 02072181769	Subject: <b>BLOOD TESTS</b>
	Fax Number:	
		Total Number of pages including this cover sheet <b>1+3</b>

Authorising Officer	Transmit Operators
Rank, Name and Appointment:	Rank/grade and Name:
Signature:	Signature:

Message/Remarks:  
 [REDACTED]  
 We spoke here is what we prepared this am on the subject.  
 [REDACTED]  
 [REDACTED]

Covering	
Descriptor	
Classification	[REDACTED]

[REDACTED]

## PRESS BRIEF

D/ACSA(N)/15/8/7  
07/06/01

## NUCLEAR TEST VETERANS : BLOOD TESTS .

### ISSUE:

How to handle the suggestion that blood testing was denied to nuclear test participants.

### LINES TO TAKE

- Blood tests were considered but it was clear at the time that there was no medical reason for them, this would still be the medical view today.
- The International Commission for Radiation Protection (ICRP) in their 1954 recommendations considered that as long as radiation monitoring was carried out and doses were low (less than 1/3 of the permissible level) then no blood tests were necessary.
- Participants who, as part of their duties, were at risk of radiation exposure were issued with radiation measuring film badges and the dose records are available. The average measured doses were well within the prescribed limits.
- Access to the potentially contaminated forward areas of the ranges was controlled and environmental monitoring undertaken at the time demonstrates that domestic areas were not contaminated.

If pressed on the fact that AWRE staff had blood tests then:

- Shortly after the test programme ended a statutory requirement was to be introduced requiring civilian radiation workers to have blood tests. In anticipation of this AWRE staff and certain RAF staff who were regularly exposed were subject to blood tests. There is, however, no statutory requirement for radiation workers to have blood tests today.

If pressed on the "legal" argument for blood tests made in the July 58 paper then:

- Given that variations in blood counts are virtually undetectable at small doses the legal argument put in 1958 is believed to reflect concerns about the possibility of a serious nuclear accidents occurring. The testing arrangements were rehearsed in order to minimise the risk of nuclear accidents and none occurred.

#### BACKGROUND:

1. It is clear from a few contemporary documents that blood tests for participants was a consideration. There is a document dated 15.7.58, which we have (almost certainly in the public domain in Australia if not here) that records a discussion at AWRE relating to blood tests for Service Personnel attending the last four tests (GRAPPLE Z) at Christmas Island. It is believed that this document has recently featured in the Australian Press. This 1958 document states that:

*"from a purely medical aspect there was little or nothing to be gained from subjecting personnel to blood counts."*

It further comments that

*"the proposal to give blood examinations was unsound"*

In the Document [REDACTED] the AWRE medical doctor then states that:

*"He could not argue the case for single blood counts on purely medical grounds but felt that the matter should be regarded from a medico-legal angle."*

The paper goes on to state concerns about subsequent charges of negligence and cases of leukaemia.

The way forward, in the paper, is agreed as:

*"All personnel at GRAPPLE Z likely to be employed in the forward area where they might be subject to radiation hazards should be given blood counts before the commencement of the tests"*

2. Medical advice is that no measurable effect is noticeable in blood cell counts at radiation doses below about 250mSv. This is very much higher than the average dose seen by the test veteran population. Blood cell counts are extremely variable both in and between individuals and can be influenced by many factors that would confound any interpretation regarding radiation exposure without supporting dosimetry. Blood tests are not a statutory requirement for radiation workers today.



Classification	[REDACTED]
Descriptor	[REDACTED]
Covering	[REDACTED]

**F Sigs 927**  
(int.9/92)

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From: [REDACTED]	Fax Number: <b>02072181769</b>	Subject: <b>BLOOD TESTS</b>	
[REDACTED] Ex4494	Fax Number:		
		Total Number of pages including this cover sheet	<b>1+3</b>

Authorising Officer	Transmit Operators
Rank, Name and Appointment:	Rank/grade and Name:
Signature:	Signature:

Message/Remarks:

[REDACTED]  
We spoke here is what we prepared this am on the subject.  
[REDACTED]

[REDACTED]

Covering	[REDACTED]
Descriptor	[REDACTED]
Classification	[REDACTED]

[REDACTED]

## PRESS BRIEF

D/ACSA(N)/15/8/7

07/06/01

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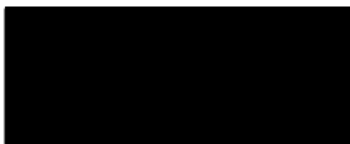
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**UNCLASSIFIED**

*Copy sent to*

MDG. 3050/58/SSB.

7th August, 1958.

Sir,

**Radiological Safety Precautions for Service Personnel  
participating in Nuclear Weapon Trials at Christmas Island.  
(Air Ministry Letter G.10/B. of H&R. dated 24.7.58. refers)**

The Medical Director-General of the Navy has taken note that it is the intention that in forthcoming weapon trials at Christmas Island all personnel who are at all likely to be exposed to ionising radiation hazards by entering the controlled areas will have preliminary blood count examinations carried out by A.W.R.E. technicians before they are detailed for this duty and concurs strongly in the need for instituting this wise precaution.

2. With reference to the other very much more numerous personnel on the Island or in snipe in the area who are unlikely to be exposed to the fall-out hazard it is considered, that in view of the considerable numbers involved, the technical difficulties of completing adequate blood examinations in time and the programme of tests under consideration, it would do more harm than good to institute an elaborate testing programme at short notice. Such a crash programme might well serve to alarm those who consider that there is no smoke without fire, it would inevitably have to be extended to all in the area eventually, and it would serve little useful medical purpose.

3. It is understood, from the facts available to the Admiralty, that the chance of personnel in the group outside the controlled areas being exposed to a radiation dose which will damage the haemopoietic systems of certain individuals represents only a remote military hazard, which preliminary blood examinations would in practice do little, or nothing to minimise. But, presumably the plans of trials might in the future be changed in certain respects so that the hazard to personnel outside the controlled area might be increased. This Department's view is that this hazard can only be assessed competently by Grapple Headquarters and the medical advisers to the Headquarters and whatever policy is suggested by this Headquarters concerning precautionary measures will almost certainly be adopted by the Admiralty.

4. Action has already been taken to arrange for blood examinations for naval replacement personnel leaving for Christmas Island in the near future by the Captain, Grapple Squadron, in accordance with the practice already adopted for naval personnel appointed to the Maralinga Range (C.A.F.O. 81/58 refers). The numbers involved are manageable, and the drafting situation was such that if action had not been initiated promptly a considerable number of personnel would have been missed if, at a later date, blood examinations for replacements were considered to be desirable by Grapple Headquarters. This instruction will be cancelled if the Air Ministry, the War Office and A.W.R.E. agree that routine blood examinations for replacements are unnecessary.

5. It is agreed that the preliminary examination of the occupants of the controlled area should conform to the Special (Ionising Radiation) Regulations (Factories Act), as laid down in the Draft, but that if a man's Pulmonary x-ray is in date and negative the chest x-ray should be omitted.

Director of Hygiene and Research,  
Air Ministry,  
1-6 Tavistock Square,  
London, W. C. 1.

AWE

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JOB #799

DATE	TIME	TO/FROM	MODE	MIN/SEC	PGS	STATUS
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DATE: \_\_\_\_\_

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Reading, Berkshire  
RG7 4PR

Tel. 0118 981 4111  
Direct Tel. 0118 982 Ext.  
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TRANSMISSION COMPRISES 2 PAGE(S), INCLUDING THIS PAGE

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Signed: \_\_\_\_\_ Ext: 7497

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**PROTECTIVE MARKING**

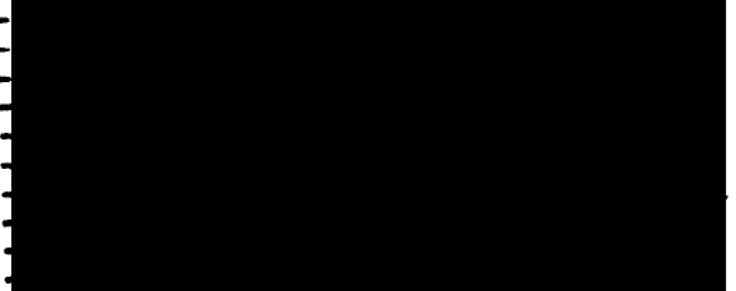
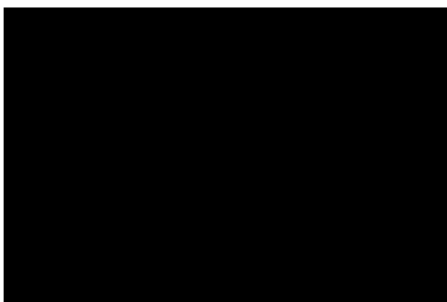
Headquarters Task Force Crapple,  
Air Ministry,  
Whitehall Cans.,  
London S.W. 1

17th July, 1958

Radiological Safety Precautions at Christmas Island

1. The question of instituting blood counts for Service personnel posted to Christmas Island has recently been under consideration by the Task Force and Atomic Weapons Research Establishment. Under present arrangements certain locations at the Base where contamination is a possibility have entry and exit thereto rigidly controlled and those who work in these areas have blood examinations. For the series of tests planned to start next August balloon supported firings will be conducted for the first time at Christmas Island. This introduces a new factor in that rehabilitation of the area contaminated after a balloon firing will be necessary and this work will be done by some 250 R.N. and R.A.F. personnel.

2. In order to determine the correct policy regarding blood counts a meeting was held at A.W.R.E. on 15th July, 1958 with representation as follows:-

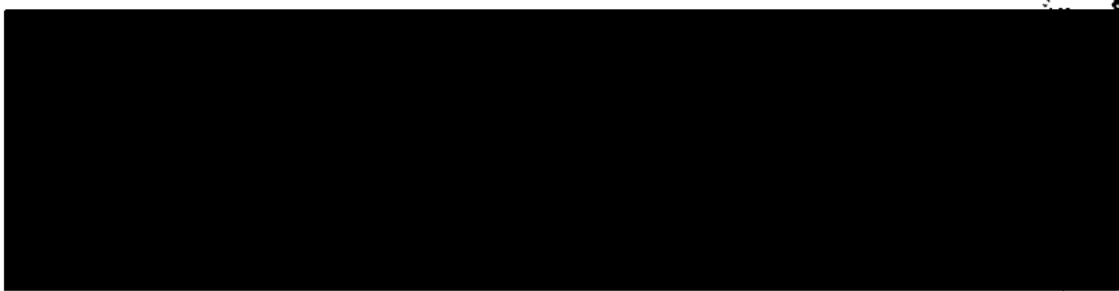


3. The conclusions reached at this meeting were as follows:-

(a) All medical opinion present agreed single blood counts to be of negligible scientific value.

(b) A.W.R.E., partly anticipating new statutory regulations under the Factories Act (not yet approved) believe that blood counts should be given to all at Christmas Island as a medico-legal safeguard, both to satisfy public opinion and as a "moral" obligation. R.A.F. medical representation at the meeting did not believe blood counts to be a medico-legal safeguard and, as they are scientifically worthless done under Service conditions, considered it "immoral" to do them.

/(c).....



C  
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(c) After some discussion the meeting concluded that we should institute one blood examination for each of those required to work in the new controlled area.

(d) The meeting agreed that it would be impracticable and valueless to institute blood counts for the remaining personnel at Christmas Island (some 4,500) but that the Services should be invited to determine whether future replacements in all three Services should be subjected to blood examinations prior to posting to Christmas Island.

4. R.A.F. Balloon Unit and Royal Engineer personnel requiring blood counts (para 3 (c)) will total approximately 250 and in view of programme timing blood counts must be completed before 22nd August, 1958. Since no facilities exist at present at Christmas Island for this type of test suitable apparatus and laboratory assistance will be required. It is possible that A.R.C. will be able to assist. Will Air Ministry (D.G.M.S.) please now initiate the necessary action for these examinations?

5. Will Air Ministry (D.G.M.S.) please initiate action with the Admiralty and War Office to determine an agreed and acceptable policy with regard to the blood counting of future Service replacement personnel posted to Christmas Island prior to departure from U.K., bearing in mind the likelihood of the statutory requirement referred to at para 3 (b). For planning purposes, population figures are as follows:-

Royal Air Force	-	2475
Army	-	1800
Royal Navy	-	<u>225</u>
Total	-	<u>4500</u>



THE FOLLOWING SHEET  
GRAPEX (58) 7TH MEETING  
IS THE ONLY ONE IN THIS  
FILE EVEN THOUGH IT APPEARS  
TO HAVE COME FROM A  
MULTI-PAGED DOCUMENT.

40107/01  
[REDACTED] [REDACTED] 48  
#2  
EO

Copy No. 5 of 35 copies

Grapex(58) 7th Meeting

Atomic Weapons Trials Executive

Operation Grapple

Meeting held at St. Giles Court on 17th July, 1958

[REDACTED]

Item 1 Minutes of previous meeting (Grapex(58)6th)

1. The minutes were agreed subject to the following corrections:-  
Page 2, Line 19 - Delete "perp", substitute "paper".  
Page 2, Line 26 - Delete "they", substitute "the".

Item 2 Matters arising

2. A.V.M. Grandy confirmed that the planned firing dates were unchanged, although he would do all he could to bring forward the dates of rounds subsequent to the first.

Item 3 Statement by Chairman on the Meeting of the Nuclear Tests Policy Committee held on Wednesday, 16th July, 1958

Observers

3. The N.T.P.C. had decided that there would be a maximum of 20 vacancies for observers for each air drop at Grapple-Z. 8 of the vacancies would be for observers of Air Vice-Marshal or equivalent status and above from the United Kingdom and other invited countries, and 12 vacancies for ~~senior~~ United Kingdom representatives.
4. The N.T.P.C. had ruled that, at the first air drop, two of the eight V.I.P. vacancies should be allotted to the United States and one to Australia. Note: Both Canada and New Zealand have said that they do not wish to receive an invitation. The Ministry of Defence would issue the invitations to these countries.

(CINO 0413)

5040  
Extn. 162

85

G.10/D. of H. & E.

24 July, 1958

Sir,

Radiological Safety Precautions at Christmas Island

I am directed to refer to the Commander Task Force Grapple's letter GSA/104/6/ORG dated 17th July, 1958 addressed to D.G.M.S., Air Ministry with copies to you. The letter records the conclusions reached by the medical representatives of the services with A.F.R.E. and Task Force Grapple staff on the desirability of carrying out preliminary blood examinations on members of the services taking part in weapon trials at Christmas Island.

2. Action is being taken by this Directorate to arrange for the blood examination of the R.A.F. Balloon Unit and Royal Engineer Unit referred to in paragraph 4. It is expected that this will be carried out at Christmas Island by technicians sent there, as a temporary measure, under arrangements made by A.F.R.E. and will be completed by August 22nd, 1958.
3. The question remains however as to whether replacement personnel of the services should in future have blood examinations made before leaving the United Kingdom for Christmas Island.
4. In the Air Ministry view, such examinations are not justified on purely medical grounds for all replacements because -
  - (a) they will not protect the Department concerned against claims for damages
  - (b) periodic fluctuations in white cell counts make the interpretation of a single count in most cases of little value.
5. The occupants of the controlled area on the other hand may, it is stated, be subjected to fall out, and the question arises as to whether it might not be advisable therefore, to adopt a preliminary examination for this group as is intended in the United Kingdom for persons exposed to ionising radiations in their occupation. If the Special (Ionising Radiation) Regulations (Factories Act) now in draft form are to be accepted as a guide it would presumably also be necessary to carry out a chest x-ray examination of each individual.
6. It will be necessary for the Services to agree a common policy and I am, therefore, to ask that the views of your department be communicated as early as possible to this directorate. The matter is now urgent as weapons trials will continue during the autumn but the technicians carrying out blood examinations for A.F.R.E. will leave Christmas Island towards the end of August to return to this country.



CIND CHIT



0194 XXIX ①  
EXT 10

Headquarters Task Force Grapple.  
Air Ministry,  
Whitehall Gardens,  
London S.W.1

SSPT/Yuials/28.

GRA/104/6/Org

2nd July, 1958

We discussed two aspects of health physics yesterday and I think it appropriate to record our views.

#### Film Badges

Should film badges be issued to those serving at Christmas Island? It has not been thought necessary to issue film badges to date. Since radio-activity and contamination at the Island may occur only in certain areas the policy has been to define these areas and control entry and exit thereto, admitting only personnel both service and civilian (A.W.R.E.) whose duty necessitates their working in these areas. These personnel have been given appropriate medical examinations (blood count) and are provided with film badges.

The remainder of the Island is not subject to contamination or radio-activity. However, as a wise insurance policy, counts are taken in all areas to ensure that backgrounds remain within limits. In lay language the count could be regarded as a communal film badge.

As we are now, for the first time, about to undertake balloon supported firings at Christmas Island, health physics for all at the Island comes under fresh examination in view of the possible differences between this type of firing and the high altitude air burst from the general radio-activity and contamination aspect. First thoughts suggest issue of film badges to all personnel. Further examination, however, indicates the wisdom of this policy to be questionable to say the least. If all personnel are to be issued with film badges, natives, both female and children, civilian merchant navy men in merchant ships and those in a similar category at the Island will have to be included. The administrative task (which of course must be met if essential) is considerable bearing in mind that the badge has to be issued, a record kept and the badge rechecked subsequent to examination for contamination after the holder has left the Island. Issue of badges at this stage may well provoke anxiety. What right have we to subject native populations and civilians to the possibility of contamination which, however remote, the issue of a badge to individuals would suggest is a likely possibility? Why should our present system of controlled areas not be extended to cover the requirements of balloon supported firings? Would this be adequate and safe?

First consideration of a film badge issue was provoked by the lego-medical aspect of disability claims. A case is now about to start and there may be some difficulty in disproving such claims. We discussed all this at some length at our meeting yesterday and our conclusion was that it would not be necessary for a general issue of film badges for Grapple Z, and that the present system of controlled areas would be safe and should continue. The Task Force will take the necessary steps to ensure that such areas are clearly

../marked....

019444  
EXT 10



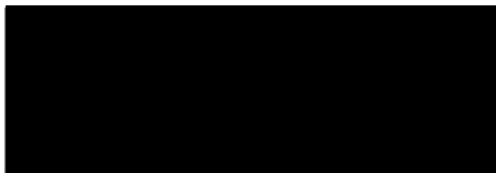
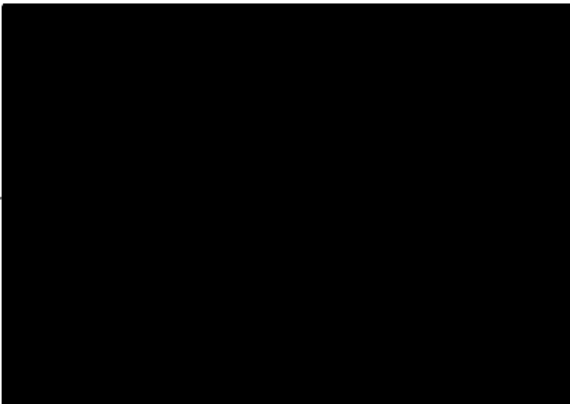
marked in appropriate languages, controlled and defined in orders and that such orders are frequently repeated. Finally, all personnel who may have to enter these controlled areas are to be examined and issued with a personal film badge.

Blood Counts

At the moment the vast majority of service personnel at Christmas Island are not medically examined (blood counts) either prior to or after serving on the Island. However, contamination levels have been calculated on the assumption that all serving at the Island could be regarded as occupational workers and this category of personnel at Aldermaston have medical tests (blood count). Those at the Island, other than A.W.R.E., however, do not.

We discussed this matter at length and were of the opinion that measures should be put into effect at the earliest opportunity to ensure that all service personnel going to Christmas Island from now on were subject to medical examination (blood count). We also thought that medical test facilities should be set up at the Island immediately so that all personnel could be examined prior to the first Grapple Z firing. I have today put these two points verbally to [redacted] and [redacted] of the H & R Medical Branch, Air Ministry. They are not in favour of instituting a universal medical examination (blood count) and consider that our present system of controlled areas is adequate. They do believe, however, that it would be a wise precaution to institute a medical examination (blood count) for those Army and other personnel who are required to take part in rehabilitation work after balloon firings at the southeast end.

I would be grateful if you would confirm or otherwise the points I have made above as far as our meeting yesterday was concerned. I will then write to the H & R department asking them to confirm their advice on the medical examination (blood count) aspect for service personnel, and ask them to provide facilities for examination of those we propose to employ on rehabilitation. If the War Office and Admiralty accept the R.A.F. view, and I will put it to them, then I think we will be clear to go ahead.



M.D.G. 3737/58

GRA/S.104/6/ORG

Radiological Safety Precautions at Christmas Island

With reference to the letter from Task Force Grapple Rear dated the 9th September, 1958 (Reference GRA/S.104/6/ORG.), M.D.G. has no way of determining when naval personnel are drafted to the Christmas Island area, whether or not they are to work in the "controlled area", but it is understood that, in fact, up to the present very few of them indeed have worked in the controlled area.

2. It would be a major undertaking to examine all naval personnel in accordance with the provisions laid down in the "Factories (Ionising Radiations) Special Regulations (Draft)", and this is clearly not required. Advice concerning the most effective way of identifying personnel who should be examined in this way is requested. It is assumed that blood examinations of all naval personnel drafted to units in the Christmas Island area are now being carried out in accordance with C.A.F.O. 81, and M.D.G. would like to be informed if any difficulties have been encountered in complying with this C.A.F.O.
3. Trials Planning Section referred for comment.



DT/CCB/30

Register No. M.D.G. 3737/58

GS/109/2/1(R)

Radiological Safety Precautions at Christmas Island

As far as T.F.S. is aware no difficulty has been experienced with the blood examinations of Naval personnel being drafted to Christmas Island.

2. With the present pattern of trials no naval personnel are required to go into the Controlled Area, and as far as can be foreseen there is no likelihood of their requiring to do so in the future.
3. However, should it subsequently be found necessary for Naval personnel to serve in the Controlled Area, it is suggested that the Commanding Officer H.M.S. ~~SPRINGFIELD~~ should keep Admiralty informed of the names of those ratings. As it is assumed that the medical examination cannot be carried out at Christmas Island, the examination would obviously have to be waived for any such ratings already out there. On the other hand, in the event of ratings being required to serve in the controlled area being drafted from U.K., it is suggested that such ratings are examined before leaving this country.
4. M.D.G. referred.



FOR COMM CEN/SIGNALS USE

NUMB

545

23 July 1954

copy

784

CINO 0668

PRECEDENCE—ACTION ROUTINE	PRECEDENCE — INFO DEFERRED	DATE — TIME GROUP	MESSAGE INSTRUCTIONS
FROM AIR MINISTRY (EXCLUSIVE) LONDON			PREFIX GR
TO BASE COMMANDER CHRISTMAS ISLAND			SECURITY CLASSIFICATION
INFO A.W.R.E.			ORIGINATOR'S NUMBER

FROM T.F.C. EXCLUSIVE FOR BOTTING.

ADVANCE NOTIFICATION IS GIVEN THAT BEFORE REHABILITATION OF FORWARD AREA  
 AFTER EACH BALLOON ROUND BLOOD COUNTS WILL BE MADE ON PERSONNEL TO BE  
 ENGAGED. THIS IS PURELY A WISE PRECAUTION EXERCISE. A.W.R.E. WILL DO COUNTS  
 IN ISLAND HOSPITAL AT RATE OF TWELVE PERSONNEL PER DAY STARTING 0830 HOURS  
 ON 4 AUGUST. HAVE MADE THIS EXCLUSIVE TO YOU AS SUBJECT LIABLE TO  
 MISINTERPRETATION. D.T.F.C. WILL EXPLAIN FULL DETAILS.



Page \_\_\_\_\_ of \_\_\_\_\_ pages

REFERS TO MESSAGE  
 CLASSIFIED  YES  NO

DRAFTER'S NAME \_\_\_\_\_ OFFICE \_\_\_\_\_ TEL No. \_\_\_\_\_

FOR OPR'S USE	R	DATE	TIME	SYSTEM	OPERATOR	D	DATE	TIME	SYSTEM	OPERATOR	RELEASING OFFICER'S SIGNATURE
											RANK



7th August, 1958.

Sir,

Radiological Safety Precautions for Service Personnel  
participating in Nuclear Weapon Trials at Christmas Island.  
(Air Ministry Letter G.10/D. of H&R. dated 24.7.58. refers)

The Medical Director-General of the Navy has taken note that it is the intention that in forthcoming weapon trials at Christmas Island all personnel who are at all likely to be exposed to ionising radiation hazards by entering the controlled areas will have preliminary blood count examinations carried out by A.W.R.E. technicians before they are detailed for this duty and concurs strongly in the need for instituting this wise precaution.

2. With reference to the other very much more numerous personnel on the Island or in snips in the area who are unlikely to be exposed to the fall-out hazard it is considered, that in view of the considerable numbers involved, the technical difficulties of completing adequate blood examinations in time and the programme of tests under consideration, it would do more harm than good to institute an elaborate testing programme at short notice. Such a crash programme might well serve to alarm those who consider that there is no smoke without fire, it would inevitably have to be extended to all in the area eventually, and it would serve little useful medical purpose.

3. It is understood, from the facts available to the Admiralty, that the chance of personnel in the group outside the controlled areas being exposed to a radiation dose which will damage the haemopoietic systems of certain individuals represents only a remote military hazard, which preliminary blood examinations would in practice do little, or nothing to minimise. But, presumably the plans of trials might in the future be changed in certain respects so that the hazard to personnel outside the controlled area might be increased. This Department's view is that this hazard can only be assessed competently by Grapple Headquarters and the medical advisers to the Headquarters and whatever policy is suggested by this Headquarters concerning precautionary measures will almost certainly be adopted by the Admiralty.

4. Action has already been taken to arrange for blood examinations for naval replacement personnel leaving for Christmas Island in the near future by the Captain, Grapple Squadron, in accordance with the practice already adopted for naval personnel appointed to the Maralinga Range (C.A.F.O. 81/58 refers). The numbers involved are manageable, and the drafting situation was such that if action had not been initiated promptly a considerable number of personnel would have been missed if, at a later date, blood examinations for replacements were considered to be desirable by Grapple Headquarters. This instruction will be cancelled if the Air Ministry, the War Office and A.W.R.E. agree that routine blood examinations for replacements are unnecessary.

5. It is agreed that the preliminary examination of the occupants of the controlled area should conform to the Special (Ionising Radiation) Regulations (Factories Act), as laid down in the Draft, but that if a man's Pulmocera x-ray is in date and negative the chest x-ray should be omitted.

QW3 0411



Our Ref: XY/270/02

Tele: Museum 3644  
Ext: 1333

MINISTRY OF SUPPLY,  
Room 671,  
ST. GILES COURT,

1-13 ST. GILES HIGH STREET,  
LONDON, W.C.2

15th August, 1953

792

With reference to my XY/270/02 of 7th August, R.A.D. now report that their staff already have blood counts before going to Christmas Island and that these are carried out at the Cambridge Military Hospital, Aldershot. My note was not, of course, intended to interfere in any way with such existing arrangements but only to cover cases where a blood examination cannot be conveniently done other than by you. The third paragraph of my letter of same reference and date addressed to C.T.F. Grapple and copied to you also refers.

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

D.A.S.  
Trials.

7 miles | 28.

2

Museum 3644,  
Extn. 1383.

7th August, 1958.

Reference: <sup>270</sup>NY/~~222~~/222

The Commander,  
Task Force Grapple,  
B.F.S.O. 170.

Radiological safety precautions at  
Christmas Island

It is the policy of the Ministry that all those about to be engaged for, or transferred to, work which carries a radiation hazard which could exceed 0.03 per week must be medically examined before engagement or transfer. The examination will include an examination of the blood.

In consequence it has been decided that all M.O.S. civilian staff who go to work at Christmas Island during a trials period should have blood examinations before they go there.

Arrangements are being made for this examination to be carried out in the future by A.S.S.S.

Your GRA/104/6/Org. dated 17th July, refers.

/Copies





[REDACTED]

EXTRACT FROM C. [REDACTED]

August, 1958.

C.A.F.O. 81 - NUCLEAR WEAPONS TRIALS PARTIES -  
BLOOD EXAMINATIONS.

(D.P.S. 174/57/M; T.P.S. 46/58 - 1 Aug. 1958)

All Naval personnel appointed or drafted to parties carrying out tests of nuclear weapons and likely to be exposed to radiation, are to have a blood examination made BEFORE leaving the United Kingdom.

2. The reason for this is to provide a base line against which to assess the results of possible future blood examinations in the event of accidental exposure of personnel to radiation levels in excess of the maximal permissible dosages.

3. Commanding Officers of establishments and ships from which officers and men are drafted to the trials parties or ships are to ensure that these blood examinations are to be carried out at the nearest Naval hospital or sick quarters or other equivalent Service or civil establishment BEFORE they take up their new appointments. The reason for requesting the examination should be given as "routine blood examination prior to joining nuclear-weapons trials party".

4. Each blood examination is to include a full erythrocyte count, haemoglobin estimation, leucocyte count and differential leucocyte count. A platelet count is not required.

5. This regulation applies to all personnel detailed for duties at Maralinga Range, South Australia, at Christmas Island and with ships attached to Grapple Squadron.

(C.A.F.O. 1 [REDACTED])

[REDACTED]

Classification	[REDACTED]
Descriptor	[REDACTED]
Covering	[REDACTED]

F Sigs 927  
(int.9/92)

# Facsimile Transmission Cover Sheet

Transmission Details		Document Details
Serial Number:	Date and time of transmission: 21/09/01	Reference: D/ACSA(N)/15/8/3
From: [REDACTED] Ex4494	Fax Number: 02072181769	Subject: MARALINGA
	Fax Number:	
		Total Number of pages including this cover sheet 1+2

To

Authorising Officer	Transmit Operators
Rank, Name and Appointment:	Rank/grade and Name:
Signature:	Signature:

Message/Remarks:

[REDACTED]  
Here is an enquiry from Australia and the reply I have sent, can you find anything in your archive on the distribution field arising from the firings at Kuli? Or any other info of relevance?

[REDACTED]

Covering	[REDACTED]
Descriptor	[REDACTED]
Classification	[REDACTED]

[REDACTED]

11 September 2001

C O M P E T I T I V E A U S T R A L I A

Sc(Nuc)2a MB (020 7218 7379 OR FAX 1769

**MOD ACSA(N)**

# Fax

**To:** [Redacted] **From:** [Redacted]

**Fax:** 0006<sup>1</sup>2621375<sup>67</sup> **Pages:** 1

**Phones:** [Click here and type phone number] **Date:** 21/09/01

**Re:** Be at Kuli **CC:** [Click here and type name]

Urgent     For Review     Please Comment     Please Reply     Please Recycle

Re your letter of 11 Sept, our records show the following combined U/Be shots fired at Kuli

Year	location	kg quantity U	kg quantity Be	No shots
59	TM11	32.5	9.5	8
59	TM11	0	4.5	17
60	TM4/16	56	18.4	15
60	TM11	35	12.3	10
61	TM4/16	45	19	14
61	TM50	26	10	16
63	TM4	76.4	3	2

We will ask AWE if they have anything on the distribution.

There were many more U only shots so total of U used at Kuli was much higher at about 7800kgs and most of this used at TM4/16. I use the TM4/16 because there is a note in our records that indicates this is the same location but that it changed number in 61 when a steel firing pad was put down. The quantities in table are totals for the year. Most of the shots in any year used same amounts of materials. Will let you know what we hear from AWE.

Yours sincerely

[Redacted Signature]

please make sure DISR receive this

0006 1262657290

copy AWE

Classification	[REDACTED]
Descriptor	[REDACTED]
Covering	[REDACTED]

F Sigs 927  
(int.9/92)

# Facsimile Transmission Cover Sheet

Transmission Details		Document Details
Serial Number:	Date and time of transmission: 21/09/01	Reference: D/ACSA(N)/15/8/3
From: [REDACTED] Ex4494	Fax Number: 02072181769	Subject: MARALINGA
	Fax Number:	
		Total Number of pages including this cover sheet
		1+2

Authorising Officer	Transmit Operators
Rank, Name and Appointment:	Rank/grade and Name:
Signature:	Signature:
<p>Message/Remarks:</p> <p>[REDACTED]</p> <p>Here is an enquiry from Australia and the reply I have sent, can you find anything in your archive on the distribution field arising from the firings at Kuli? Or any other info of relevance?</p> <p>[REDACTED]</p>	

Covering	[REDACTED]
Descriptor	[REDACTED]
Classification	[REDACTED]

[REDACTED]

// September 2001

C O M P E T I T I V E A U S T R A L I A

[REDACTED]

Sc(Nuc)2a MB (020 7218 7379 OR FAX 1769

**MOD ACSA(N)**

# Fax

**To:** [Redacted] **From:** [Redacted]

**Fax:** 0006<sup>1</sup>2621375<sup>67</sup> **Pages:** 1

**Phones:** [Click here and type phone number] **Date:** 21/09/01

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61	TM4/16	45	19	14
61	TM50	26	10	16
63	TM4	76.4	3	2

We will ask AWE if they have anything on the distribution.

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Yours sincerely

[Redacted Signature]

Copy [Redacted] - please make sure DISR receive this

0006 1262657290

Copy AWE

[Redacted]

Highest levels of <sup>ground</sup> contamination at or near fringe point

Measurements from Maralinga expts intended to provide info on the possible hazard to personnel working in fringe area & little is known about contamination levels at considerable distances downwind.

Classification	[REDACTED]
Descriptor	[REDACTED]
Covering	[REDACTED]

F Sigs 927  
(int.9/92)

# Facsimile Transmission Cover Sheet

Transmission Details		Document Details	
Serial Number:	Date and time of transmission: 04/05/01 08:50	Reference: D/ACSA(N)/15/8/3	
From: [REDACTED]	Fax Number: 02072181769	Subject: TV BROWN & PRE TEST WEATHER ANALYSIS	
[REDACTED] Ex4494	Fax Number:		
		Total Number of pages including this cover sheet	2

Authorising Officer	Transmit Operators
Rank, Name and Appointment:	Rank/grade and Name:
Signature:	Signature:

Message/Remarks:

[REDACTED]  
I copy you a letter I recently sent to [REDACTED] I promised him a search for info on how weather (wind speed and direction mainly) criteria were set and analysed and he has now reminded me.

I believe I saw something in the first few vols (1956/57) in the GRAPPLE files we looked thro the other day but had forgotten my promise to him.

Can you please look to see what relevant info there is and send me copies, lets talk after you have looked

Covering	[REDACTED]
Descriptor	[REDACTED]
Classification	[REDACTED]

[REDACTED]



From [REDACTED]

**MINISTRY OF DEFENCE**

[REDACTED] Main Building, Whitehall, London, SW1A 2HB

Telephone	(Direct dial)	020 7218 7379
	(Switchboard)	020 7218 9000
	(Fax)	020 7218 7400

Your Reference

Our Reference: D/ACSA(N)/15/8/4

Date 19/04/01

Dear [REDACTED]

I reply to your letter of 15/4/01.

You are correct in saying a key was in the weather forecasting, that is why such a considerable effort was spent on this aspect of the trials safety planning. It was one of the main reasons for some of the RN and RNZ ships being present for they acted as mobile weather stations and a major part of the RAF effort was dedicated to pre shot weather measurements. The interpretation of the pre shot weather data necessitated the establishment of a Met Office station on the Island for this specific purpose. Just how this interpretation was undertaken and the criteria against which it was judged were, as I have said before, quite complex. Records of how the decisions were made on the day are not readily traceable but I will initiate a search. Some of this effort was a precaution against an accident such as the aircraft crashing on take off (and for example the weapon being consumed in the resulting fire) or the weapon detonating on the sea surface rather than at altitude, under these circumstances there would have been local fallout. No such event however occurred.

Certainly ambient wind speed and direction are factors but there is also the dynamics of the fireball to take into account. The rate of rise is typically about 300ft per second (200mph) in the first few seconds after detonation with the cloud reaching heights in excess of 12 miles within less than 10 minutes. Low level winds are therefore of little influence on any subsequent fallout patterns from high air bursts such as the CI tests. Most fission products were carried far aloft and contributed to dispersed global fallout.

The bottom line in all this is that the environmental monitoring undertaken at the time shows there was no significant fallout on the Island.

I do not know what evidence you have for there being fallout as you describe and I can therefore provide no response to your main question.

As to the four starred points, the first I answered in January as to the second I am sure I have provided sufficient information with my letter of 12/09/00 to demonstrate adequate safety distances. As to men down wind, I hope the above explanation will help you appreciate that this was not so and lastly I fail to understand why you think "our record of revised yields is incorrect".

I hope this further information is of help.

Yours sincerely



Classification  
Descriptor  
Covering

[REDACTED]
[REDACTED]
[REDACTED]

F Sigs 927  
(int.9/92)

# Facsimile Transmission Cover Sheet

Transmission Details		Document Details	
Serial Number:	Date and time of transmission: 02/05/01 12:33:08	Reference: D/ACSA(N)/15/8/3	
From: [REDACTED]	Fax Number: 02072181769	Subject: PE response GREEN	
[REDACTED] Ex4494	Fax Number:		
		Total Number of pages including this cover sheet	3

Authorising Officer	Transmit Operators
Rank, Name and Appointment:	Rank/grade and Name:
Signature: [REDACTED]	Signature:

Message/Remarks:

[REDACTED]  
Thanks for the help yesterday.

In light of our discussions I have changed my draft response somewhat. Your and a HP persons view on what I have said would be appreciated. The response has to go up next Thurs 10<sup>th</sup> but we need to staff in ACSA(N) first so thoughts by early next week please

Covering  
Descriptor  
Classification

[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]

GREEN 3

DRAFT

2/05/01

rephr

Thank you for the further letter from your constituent [REDACTED] In reply to your first letter (US 0149/2001) I drew attention to an AWRE report of June 1964 and I can now provide a copy. This is a technical report on the final radiological survey of the Island and I hope this will provide some of the answers to the questions [REDACTED] asks.

The report confirms there were three areas of fixed contamination (para 4.2) – the water tanker, the wash-down pad including some buildings & the hold-up tank. It goes on to provide data on contamination levels and the associated dose rates. The report also identifies a few other places where lower levels of contamination, within tolerance, existed.

The tolerance level for this fixed surface contamination at the time of the surveys is stated as an activity level of  $10^{-4}$  micro ( $\mu$ ) curies/cm<sup>2</sup> (para.4.1) and this as expressed as 4cps (counts per second) on a radiation monitor. It is convention now, and has been for many years, to define radiation controls in terms of dose rather than activity and this makes a comparison of the 1964 figure with current legislation difficult without information on the materials in question. However the report not only provides survey results in cps (figure 5) but also in dose rate (fig 4 & 8) and these can be used to make a direct comparison. The highest averaged dose rates are found in some very small areas in the open hold-up tank (Fig.8) at 0.5mR/hr and this equates to 0.005mSv/hr in to-days units. The principal public dose limit set in legislation today is 1mSv per year and someone would have to stay within a very short distance of (and would probably need to stand on) this contamination for some 200 hrs in order to receive 1mSv. All the fixed contaminated areas are adjacent and were fenced off at the termination of the US trials in 1962, although clearly not very effectively (para 4.2.2). The water tanker was stored within this area (para. 4.2.1). The report indicates briefly how the contamination was subsequently dealt with.

[REDACTED] is concerned about the contamination of the ground water and I take it he means the natural underground water that was drawn on for drinking and domestic use. The main source of domestic water was from the northern coastal ridge where some 2000 million gallons were thought to exist in fresh water bearing sands. The water table was very high and therefore the water supply was at risk of contamination from a whole range of human activities. Much of the supply came from a distillation plant and it is inconceivable that this water supply ~~were~~ were not subject to regular inspection but we can trace no surviving records to demonstrate the point.

The main potential source of radiation contamination of the ground water was from the water used to clean the aircraft that flew the cloud sampling missions. The US carried out far more tests than the UK (24 in two months against 9 in eighteen). Their aircraft cleaning processes provided for the collection of cleaning water in an open tank and its discharge via a pipeline to sea, it was moved from the open tank to the discharge point in the tanker. We hold records of a UK/US meeting held in March 1962 (copy attached) at which the possibility of this water collection system failing and contaminating domestic supplies is analysed. The analysis shows that should this

occur (and there are no records to suggest it did) the level of contamination would, taking due account of sand filtering, be well within guidelines.

The few surviving records indicate that the UK used concrete lined filter beds as a soak away system for the aircraft cleaning water, dumping the contaminated filter bed material at sea in sealed drums, and separately collecting the water in a sealed tank. The UK also let the aircraft stand for some days before cleaning thereby taking advantage of the high radioactive decay rates typical of most fission products.

It is therefore clear that the danger of contaminating domestic supplies was recognised and appropriate precautions put in place. There is no reason to believe these were not effective.

AWE

JOB #952

DATE	TIME	TO/FROM	MODE	MIN/SEC	PGS	STATUS
001	4/19 14:32	0171 218 1769	EC--S	00' 43"	002	OK

TIME RECEIVED:  
DATE:



**PROTECTIVE MARKING  
SHALL BE COMPLETED**



**FACSIMILE LEADER SHEET**

From: Bldg No.   
To: Fax No. 0207 218 1769

AWE, Aldermaston  
Reading, Berkshire  
RG7 4PR

Tel. 0118 981 4111  
Direct Tel. 0118 982 Ext.  
Fax. 0118 981 5320

TRANSMISSION COMPRISES 2 PAGE(S), INCLUDING THIS PAGE

Message : As per our telecon.

*(Large empty rectangular area for message content)*

Signed:

Ext: 7497

ORIGINATORS

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AWE

JOB #906

DATE	TIME	TO/FROM	MODE	MIN/SEC	PGS	STATUS
001 3/29	11:18	0171 218 1769	EC--S	03' 11"	010	OK

TIME RECEIVED:  
DATE:

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FACSIMILE LEADER SHEET

From: \_\_\_\_\_ Bldg No. \_\_\_\_\_  
To: \_\_\_\_\_ Fax No. 0207 218 1769

AWE, Aldermaston  
Reading, Berkshire  
RG7 4PR

Tel. 0118 981 4111  
Direct Tel. 0118 982 Ext.  
Fax. 0118 981 5320

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Message : As per our telecon.

NB \_\_\_\_\_ in T1/95 gives mean doses for Contaminated Clothing Trials Indoctrinees as 0.5 mSv.

Signed: \_\_\_\_\_

Ext: 7497

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AWE

JOB #886

DATE	TIME	TO/FROM	MODE	MIN/SEC	PGS	STATUS
001	3/22 13:13	DRPS ALVERSTOKE	UF--S	01' 15"	004	OK

TIME RECEIVED:

DATE:

PROTECTIVE MARKING SHALL BE COMPLETED



FACSIMILE LEADER SHEET

From: \_\_\_\_\_ Bldg No. \_\_\_\_\_  
 To: \_\_\_\_\_ Fax No. 02392 768 150

AWE, Aldermaston Reading, Berkshire RG7 4PR

Tel. 0118 981 4111  
 Direct Tel. 0118 982 Ext.  
 Fax. 0118 981 5320

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Message : As per our telecon.

Signed: \_\_\_\_\_

Ext: 7497

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AWE

JOB #816

DATE	TIME	TO/FROM	MODE	MIN/SEC	PGS	STATUS
001	2/19 13:28	002072180758	UF--S	01' 33"	005	OK

TIME RECEIVED:  
DATE:

PROTECTIVE MARKING  
SHALL BE COMPLETED



**FACSIMILE LEADER SHEET**

From: [REDACTED] Bldg No. [REDACTED]  
To: [REDACTED] Fax No. 0207 218 0758

AWE, Aldermaston  
Reading, Berkshire  
RG7 4PR

Tel. 0118 981 4111  
Direct Tel. 0118 982 Ext.  
Fax. 0118 981 5320

TRANSMISSION COMPRISES 5 PAGE(S), INCLUDING THIS PAGE

Message :

[REDACTED MESSAGE CONTENT]

Signed: [REDACTED] Ext: 7497

ORIGINATORS

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JOB #801

DATE	TIME	TO/FROM	MODE	MIN/SEC	PGS	STATUS
001	2/07 13:36	0171 218 1769	EC--S	00' 36"	002	OK

TIME RECEIVED:  
DATE:



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SHALL BE COMPLETED**



**FACSIMILE LEADER SHEET**

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To: Fax No. 0207 218 1769

AWE, Aldermaston  
Reading, Berkshire  
RG7 4PR

Tel. 0118 981 4111  
Direct Tel. 0118 982 Ext.  
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Message : As per our telecon.

Signed: \_\_\_\_\_ Ext: 7497

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\*\*\* INCOMPLETE DESTINATION(S) HIGHLIGHTED BELOW \*\*\*

JOB #800

DATE	TIME	TO/FROM	MODE	MIN/SEC	PGS	STATUS
001	2 07 11:14	000272180758	----S	00' 00"	000	N A

TIME RECEIVED:  
DATE:

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SHALL BE COMPLETED



FACSIMILE LEADER SHEET

From: [redacted] Bldg No. [redacted]  
To: [redacted] Fax No. 0207 218 7400

AWE, Aldermaston  
Reading, Berkshire  
RG7 4PR

Tel. 0118 981 4111  
Direct Tel. 0118 982 Ext.  
Fax. 0118 981 5320

TRANSMISSION COMPRISES 2 PAGE(S), INCLUDING THIS PAGE

Message : As per our telecon.

Signed: [redacted]

Ext: 7497

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JOB #726

DATE	TIME	TO/FROM	MODE	MIN/SEC	PGS	STATUS
001	1/04 15:31	002072180758	UF--S	01' 06"	003	OK

TIME RECEIVED:  
DATE:



**PROTECTIVE MARKING  
SHALL BE COMPLETED**



**FACSIMILE LEADER SHEET**

From: Bldg No.   
To: Fax No. 020 7218 0758

AWE, Aldermaston  
Reading, Berkshire  
RG7 4PR

Tel. 0118 981 4111  
Direct Tel. 0118 982 Ext.  
Fax. 0118 981 5320

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Message : As per your fax.

Signed:

Ext: 7497

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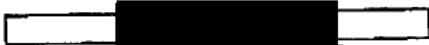
**PROTECTIVE MARKING**

AWE

JOB #715

DATE	TIME	TO/FROM	MODE	MIN/SEC	PGS	STATUS
001	12/19 14:09	DRPS ALVERSTOKE	UF--S	00' 28"	002	OK




TIME RECEIVED:  
DATE:



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FACSIMILE LEADER SHEET

From:  Bldg No.   
 To:  Fax No. 023 92 768 150

AWE, Aldermaston Reading, Berkshire RG7 4PR

Tel. 0118 981 4111  
 Direct Tel. 0118 982 Ext.  
 Fax. 0118 981 5320

TRANSMISSION COMPRISES 2 PAGE(S), INCLUDING THIS PAGE

Message : As per our phone conversation. This is to confirm that Tues 16/01 is OK for us. Please supply the personal info on the form by Fri 12/01 latest. Please come to the visitor's reception at Main Gate (lead-in map follows by snailmail). You will be forced to watch a boring safety video. We will collect you from there.

Signed: 

Ext: 7497

ORIGINATORS

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JOB #680

DATE	TIME	TO/FROM	MODE	MIN/SEC	PGS	STATUS
001 12/05	15:31	SCIENCE (NUCLEAR) 2	UF--S	01' 39"	004	OK

TIME RECEIVED:  
DATE:

PROTECTIVE MARKING  
SHALL BE COMPLETED



FACSIMILE LEADER SHEET

From: [redacted] Bldg No. [redacted]  
To: [redacted] Fax No. 0207 218 7400

AWE, Aldermaston  
Reading, Berkshire  
RG7 4PR

Tel. 0118 981 4111  
Direct Tel. 0118 982 Ext.  
Fax. 0118 981 5320

TRANSMISSION COMPRISES 4 PAGE(S), INCLUDING THIS PAGE

Message : First draft of reply to [redacted] for your comments.

Signed: [redacted] Ext: 7497

ORIGINATORS

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JOB #652

DATE	TIME	TO/FROM	MODE	MIN/SEC	PGS	STATUS
001 11/23	13:24	SCIENCE (NUCLEAR) 2	UF--S	01' 01"	003	OK

TIME RECEIVED:  
DATE:

PROTECTIVE MARKING  
SHALL BE COMPLETED



FACSIMILE LEADER SHEET

From: [REDACTED] Bldg No. [REDACTED]  
To: [REDACTED] Fax No. 0207 218 7400

AWE, Aldermaston  
Reading, Berkshire  
RG7 4PR

Tel. 0118 981 4111  
Direct Tel. 0118 982 Ext.  
Fax. 0118 981 5320

TRANSMISSION COMPRISES 3 PAGE(S), INCLUDING THIS PAGE

Message : As per phone call.

Signed: [REDACTED]

Ext: 7497

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PROTECTIVE MARKING

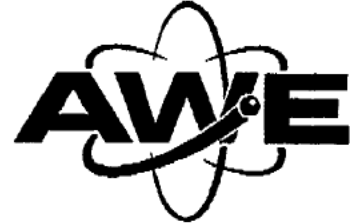
AWE

JOB #599

DATE	TIME	TO/FROM	MODE	MIN/SEC	PGS	STATUS
001	11/03 11:15	SCIENCE (NUCLEAR) 2	UF--S	01' 21"	003	OK

TIME RECEIVED:  
DATE:

PROTECTIVE MARKING  
SHALL BE COMPLETED



FACSIMILE LEADER SHEET

From: [REDACTED] Bldg No. [REDACTED]  
To: [REDACTED] Fax No. 0207 218 7400

AWE, Aldermaston  
Reading, Berkshire  
RG7 4PR

Tel. 0118 981 4111  
Direct Tel. 0118 982 Ext.  
Fax. 0118 981 5320

TRANSMISSION COMPRISES 3 PAGE(S), INCLUDING THIS PAGE

Message : ATT

Signed: [REDACTED] Ext: 7497

ORIGINATORS

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JOB #554

DATE	TIME	TO/FROM	MODE	MIN/SEC	PGS	STATUS
001	10/16 15:53	002072180758	UF--S	02' 02"	006	OK

TIME RECEIVED:  
DATE:

PROTECTIVE MARKING  
SHALL BE COMPLETED



**FACSIMILE LEADER SHEET**

From: [redacted] Bldg No. [redacted]  
To: [redacted] Fax No. 0207 218 0758

AWE, Aldermaston  
Reading, Berkshire  
RG7 4PR

Tel. 0118 981 4111  
Direct Tel. 0118 982 Ext.  
Fax. 0118 981 5320

TRANSMISSION COMPRISES 6 PAGE(S), INCLUDING THIS PAGE

Message :

[Large empty rectangular box for message content]

Signed: [redacted]

Ext: 7497

ORIGINATORS

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PROTECTIVE MARKING



AWE

JOB #484

DATE	TIME	TO/FROM	MODE	MIN/SEC	PGS	STATUS
001	9/12 14:23	SCIENCE (NUCLEAR) 2	UF--S	02' 51"	007	OK

TIME RECEIVED:  
DATE:

PROTECTIVE MARKING  
SHALL BE COMPLETED



FACSIMILE LEADER SHEET

From: [redacted] Bldg No. [redacted]  
To: [redacted] Fax No. 0207 218 7400

AWE, Aldermaston  
Reading, Berkshire  
RG7 4PR

Tel. 0118 981 4111  
Direct Tel. 0118 982 Ext.  
Fax. 0118 981 5320

TRANSMISSION COMPRISES 7 PAGE(S), INCLUDING THIS PAGE

Message : As per our phone conversation, Design yield does not seem to have been decided until late in the day: all safety planning was based on an assumption of 5M max.

Signed: [redacted]

Ext: 7497

ORIGINATORS

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JOB #472

DATE	TIME	TO/FROM	MODE	MIN/SEC	PGS	STATUS
001	8/30 11:29	01253 332525	EC--S	02' 07"	006	OK

TIME RECEIVED:  
DATE:

PROTECTIVE MARKING  
SHALL BE COMPLETED



**FACSIMILE LEADER SHEET**

From: [redacted] Bldg No. [redacted]  
To: [redacted] Fax No. 01253 33 25 25

AWE, Aldermaston  
Reading, Berkshire  
RG7 4PR

Tel. 0118 981 4111  
Direct Tel. 0118 982 Ext.  
Fax. 0118 981 5320

TRANSMISSION COMPRISES 6 PAGE(S), INCLUDING THIS PAGE

Message : Copy of letter sent 25/07 as per our phone conversation am 30/08.

Signed: [redacted]

Ext: 7497

ORIGINATORS

- 1) UNLESS THE ADJACENT BOX IS TICKED, THIS LEADER SHEET AND ANY ATTACHMENTS WILL BE DESTROYED.
- 2) TRANSMISSIONS WITHIN THE UNITED KINGDOM, EXCLUDING NORTHERN IRELAND, ARE LIMITED TO RESTRICTED. FOR CONFIDENTIAL AND ABOVE, CONTACT THE COMMUNICATIONS CENTRE ON EXT. 5957. TRANSMISSIONS TO NORTHERN IRELAND AND THE REST OF THE WORLD SHALL BE LIMITED TO UNCLASSIFIED ONLY.

**RECIPIENTS: IF THE TRANSMISSION IS INCOMPLETE OR ILLEGIBLE, CALL THE AWE  
FAX OFFICE ON 0118 982 5038 IN UK, INTERNATIONAL +44 118 982 5038**

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Registration Number 02763902. Registered Office - AWE, Aldermaston, Reading, Berkshire, RG7 4PR

PROTECTIVE MARKING

AWE

JOB #452

DATE	TIME	TO/FROM	MODE	MIN/SEC	PGS	STATUS
001	8/21 15:40	SCIENCE (NUCLEAR) 2	UF--S	00' 49"	002	OK

TIME RECEIVED:  
DATE:

PROTECTIVE MARKING  
SHALL BE COMPLETED



**FACSIMILE LEADER SHEET**

From: \_\_\_\_\_ Bldg No. \_\_\_\_\_  
To: \_\_\_\_\_ Fax No. 0207 218 7400

AWE, Aldermaston  
Reading, Berkshire  
RG7 4PR

Tel. 0118 981 4111  
Direct Tel. 0118 982 Ext.  
Fax. 0118 981 5320

TRANSMISSION COMPRISES 2 PAGE(S), INCLUDING THIS PAGE

Message : Re the Australian judgment on servicemen at Hiroshima, we have had the attached comment from \_\_\_\_\_

Signed: \_\_\_\_\_ Ext: 7497

ORIGINATORS

- 1) UNLESS THE ADJACENT BOX IS TICKED, THIS LEADER SHEET AND ANY ATTACHMENTS WILL BE DESTROYED.
- 2) TRANSMISSIONS WITHIN THE UNITED KINGDOM, EXCLUDING NORTHERN IRELAND, ARE LIMITED TO RESTRICTED. FOR CONFIDENTIAL AND ABOVE, CONTACT THE COMMUNICATIONS CENTRE ON EXT. 5957. TRANSMISSIONS TO NORTHERN IRELAND AND THE REST OF THE WORLD SHALL BE LIMITED TO UNCLASSIFIED ONLY.

**RECIPIENTS: IF THE TRANSMISSION IS INCOMPLETE OR ILLEGIBLE, CALL THE AWE FAX OFFICE ON 0118 982 5038 IN UK, INTERNATIONAL +44 118 982 5038**

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PROTECTIVE MARKING

AWE

JOB #448

DATE	TIME	TO/FROM	MODE	MIN/SEC	PGS	STATUS
001	8/21 11:44	SCIENCE (NUCLEAR) 2	UF--S	02' 23"	006	OK

TIME RECEIVED:  
DATE:

PROTECTIVE MARKING  
SHALL BE COMPLETED



**FACSIMILE LEADER SHEET**

From: [REDACTED] Bldg No. [REDACTED]  
To: [REDACTED] Fax No. 0207 218 7400

AWE, Aldermaston  
Reading, Berkshire  
RG7 4PR

Tel. 0118 981 4111  
Direct Tel. 0118 982 Ext.  
Fax. 0118 981 5320

TRANSMISSION COMPRISES 6 PAGE(S), INCLUDING THIS PAGE

Message : Further to your phone call on Friday. I attach quotable extracts giving burst positions. It seems that the numbers on my NZ ships report were simple typos - the numbers seem to have been interchanged. Many apologies!.

Signed: [REDACTED] Ext: 7497

**ORIGINATORS**

- 1) UNLESS THE ADJACENT BOX IS TICKED, THIS LEADER SHEET AND ANY ATTACHMENTS WILL BE DESTROYED.
- 2) TRANSMISSIONS WITHIN THE UNITED KINGDOM, EXCLUDING NORTHERN IRELAND, ARE LIMITED TO RESTRICTED. FOR CONFIDENTIAL AND ABOVE, CONTACT THE COMMUNICATIONS CENTRE ON EXT. 5957. TRANSMISSIONS TO NORTHERN IRELAND AND THE REST OF THE WORLD SHALL BE LIMITED TO UNCLASSIFIED ONLY.

**RECIPIENTS: IF THE TRANSMISSION IS INCOMPLETE OR ILLEGIBLE, CALL THE AWE FAX OFFICE ON 0118 982 5038 IN UK, INTERNATIONAL +44 118 982 5038**

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PROTECTIVE MARKING

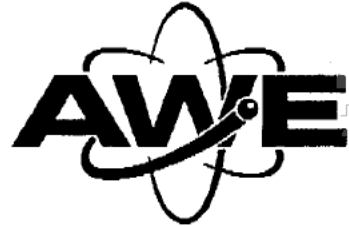
AWE

JOB #440

DATE	TIME	TO/FROM	MODE	MIN/SEC	PGS	STATUS
001	8/18 15:27	01253 330437	EC--S	03' 40"	007	OK

TIME RECEIVED:  
DATE:

PROTECTIVE MARKING  
SHALL BE COMPLETED



**FACSIMILE LEADER SHEET**

From: [REDACTED] Bldg No. [REDACTED]  
To: [REDACTED] Fax No. 01253 330 437

AWE, Aldermaston  
Reading, Berkshire  
RG7 4PR

Tel. 0118 981 4111  
Direct Tel. 0118 982 Ext.  
Fax. 0118 981 5320

TRANSMISSION COMPRISES 7 PAGE(S), INCLUDING THIS PAGE

Message : As requested in your fax of 16 Aug. Many apologies for misunderstanding. Clean copy follow by post.

Signed: [REDACTED]

Ext: 7497

ORIGINATORS

- 1) UNLESS THE ADJACENT BOX IS TICKED, THIS LEADER SHEET AND ANY ATTACHMENTS WILL BE DESTROYED.
- 2) TRANSMISSIONS WITHIN THE UNITED KINGDOM, EXCLUDING NORTHERN IRELAND, ARE LIMITED TO RESTRICTED. FOR CONFIDENTIAL AND ABOVE, CONTACT THE COMMUNICATIONS CENTRE ON EXT. 5957. TRANSMISSIONS TO NORTHERN IRELAND AND THE REST OF THE WORLD SHALL BE LIMITED TO UNCLASSIFIED ONLY.

**RECIPIENTS: IF THE TRANSMISSION IS INCOMPLETE OR ILLEGIBLE, CALL THE AWE FAX OFFICE ON 0118 982 5038 IN UK, INTERNATIONAL +44 118 982 5038**

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PROTECTIVE MARKING

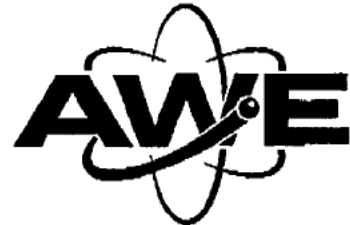
AWE

JOB #437

DATE	TIME	TO/FROM	MODE	MIN/SEC	PGS	STATUS
001	8/16 15:34	SCIENCE (NUCLEAR) 2	UF--S	02' 28"	003	OK

TIME RECEIVED:  
DATE:

PROTECTIVE MARKING  
SHALL BE COMPLETED



**FACSIMILE LEADER SHEET**

From: [redacted] Bldg No. [redacted]  
To: [redacted] Fax No. 0207 218 7400

AWE, Aldermaston  
Reading, Berkshire  
RG7 4PR

Tel. 0118 981 4111  
Direct Tel. 0118 982 Ext.  
Fax. 0118 981 5320

TRANSMISSION COMPRISES 3 PAGE(S), INCLUDING THIS PAGE

Message : Further to your phone call. The earliest reference to Canberra air sampling I can find is the article in The Aeroplane by the navigator, [redacted] on 18 December 1953. Presumably it was written with official approval. Copy attached. [redacted] book, published in 1967, gives a brief outline of operations, presumably gathered from personal contacts. AVM Menaul's book published in 1980 gives a bit more detail. He was with 76 Sqdn at MOSAIC. All the accounts published after this seem to be in response to the interest raised by the ARC and use info released for it. Two UC films were released to the National Film and TV Archive in 1970, one on decontamination at GZ and one made for the RAF entitled 'Contamination Control'. [redacted] claims to have seen both before she came here.

Signed: [redacted] Ext: 7497

ORIGINATORS

- 1) UNLESS THE ADJACENT BOX IS TICKED, THIS LEADER SHEET AND ANY ATTACHMENTS WILL BE DESTROYED.
- 2) TRANSMISSIONS WITHIN THE UNITED KINGDOM, EXCLUDING NORTHERN IRELAND, ARE LIMITED TO RESTRICTED. FOR CONFIDENTIAL AND ABOVE, CONTACT THE COMMUNICATIONS CENTRE ON EXT. 5957. TRANSMISSIONS TO NORTHERN IRELAND AND THE REST OF THE WORLD SHALL BE LIMITED TO UNCLASSIFIED ONLY.

**RECIPIENTS: IF THE TRANSMISSION IS INCOMPLETE OR ILLEGIBLE, CALL THE AWE FAX OFFICE ON 0118 982 5038 IN UK, INTERNATIONAL +44 118 982 5038**

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PROTECTIVE MARKING

AWE

JOB #430

DATE	TIME	TO/FROM	MODE	MIN/SEC	PGS	STATUS
001	8/14 14:13		63770 EC--S	02' 13"	007	OK

TIME RECEIVED:  
DATE:

PROTECTIVE MARKING  
SHALL BE COMPLETED



**FACSIMILE LEADER SHEET**

From: \_\_\_\_\_ Bldg No. \_\_\_\_\_  
To: \_\_\_\_\_ Fax No. 01253 333 770

AWE, Aldermaston  
Reading, Berkshire  
RG7 4PR

Tel. 0118 981 4111  
Direct Tel. 0118 982 Ext.  
Fax. 0118 981 5320

TRANSMISSION COMPRISES 7 PAGE(S), INCLUDING THIS PAGE

Message : FAO \_\_\_\_\_ s per phone call.

Signed: \_\_\_\_\_ Ext: 7497

**ORIGINATORS**

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- 2) TRANSMISSIONS WITHIN THE UNITED KINGDOM, EXCLUDING NORTHERN IRELAND, ARE LIMITED TO RESTRICTED. FOR CONFIDENTIAL AND ABOVE, CONTACT THE COMMUNICATIONS CENTRE ON EXT. 5957. TRANSMISSIONS TO NORTHERN IRELAND AND THE REST OF THE WORLD SHALL BE LIMITED TO UNCLASSIFIED ONLY.

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PROTECTIVE MARKING

AWE

JOB #388

DATE	TIME	TO/FROM	MODE	MIN/SEC	PGS	STATUS
001	7/25 14:24	002072180758	UF--S	01' 04"	003	OK

TIME RECEIVED:  
DATE:

PROTECTIVE MARKING  
SHALL BE COMPLETED



**FACSIMILE LEADER SHEET**

From: \_\_\_\_\_ Bldg No. \_\_\_\_\_  
To: \_\_\_\_\_ Fax No. 0207 218 0758

AWE, Aldermaston  
Reading, Berkshire  
RG7 4PR

Tel. 0118 981 4111  
Direct Tel. 0118 982 Ext.  
Fax. 0118 981 5320

TRANSMISSION COMPRISES 3 PAGE(S), INCLUDING THIS PAGE

Message :

[Large empty rectangular box for message content]

Signed: \_\_\_\_\_ Ext: 7497

ORIGINATORS

- 1) UNLESS THE ADJACENT BOX IS TICKED, THIS LEADER SHEET AND ANY ATTACHMENTS WILL BE DESTROYED.
- 2) TRANSMISSIONS WITHIN THE UNITED KINGDOM, EXCLUDING NORTHERN IRELAND, ARE LIMITED TO RESTRICTED. FOR CONFIDENTIAL AND ABOVE, CONTACT THE COMMUNICATIONS CENTRE ON EXT. 5957. TRANSMISSIONS TO NORTHERN IRELAND AND THE REST OF THE WORLD SHALL BE LIMITED TO UNCLASSIFIED ONLY.

**RECIPIENTS: IF THE TRANSMISSION IS INCOMPLETE OR ILLEGIBLE, CALL THE AWE FAX OFFICE ON 0118 982 5038 IN UK, INTERNATIONAL +44 118 982 5038**

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PROTECTIVE MARKING



AWE

JOB #385

DATE	TIME	TO/FROM	MODE	MIN/SEC	PGS	STATUS
001	7/24 10:58	SCIENCE (NUCLEAR) 2	UF--S	00' 53"	002	OK

TIME RECEIVED:  
DATE:

[REDACTED]  
**PROTECTIVE MARKING  
SHALL BE COMPLETED**



**FACSIMILE LEADER SHEET**

From: [REDACTED] Bldg No. [REDACTED]  
To: [REDACTED] Fax No. 0207 218 7400

AWE,

Tel.  
Direct Tel.  
Fax.

TRANSMISSION COMPRISES 2 PAGE(S), INCLUDING THIS PAGE

Message :

*As per phone call*

Signed: [REDACTED]

Ext: 7497

ORIGINATORS

- 1) UNLESS THE ADJACENT BOX IS TICKED, THIS LEADER SHEET AND ANY ATTACHMENTS WILL BE DESTROYED.
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[REDACTED]  
**PROTECTIVE MARKING**

AWE

JOB #349

DATE	TIME	TO/FROM	MODE	MIN/SEC	PGS	STATUS
001	7/07 11:48	SCIENCE (NUCLEAR) 2	UF--S	00' 25"	001	OK

TIME RECEIVED:  
DATE:

[REDACTED]

**PROTECTIVE MARKING  
SHALL BE COMPLETED**



**FACSIMILE LEADER SHEET**

From: [REDACTED] Bldg No. [REDACTED]  
To: [REDACTED] Fax No. 0207 218 7400

AWE, Aldermaston  
Reading, Berkshire  
RG7 4PR

Tel. 0118 981 4111  
Direct Tel. 0118 982 Ext.  
Fax. 0118 981 5320

TRANSMISSION COMPRISES PAGE(S), INCLUDING THIS PAGE

Message : Did you spot this in New Scientist 10 June?

**It's never safe**

The Federal Court of Australia has ruled that two soldiers died of cancer because they were exposed to low levels of radiation while occupying Hiroshima in 1945. The decision last month backs the consensus among regulatory agencies that there is no threshold below which radiation is safe—a view that is increasingly challenged in the US and France. The soldiers received doses of less than 5 millisieverts, while the international safety limit for workers is 20 millisieverts. "Even extremely low doses have an associated risk," [REDACTED]

[REDACTED] of the Australian Radiation Protection Society told the court.

Signed: [REDACTED]

Ext: 7497

ORIGINATORS

- 1) UNLESS THE ADJACENT BOX IS TICKED, THIS LEADER SHEET AND ANY ATTACHMENTS WILL BE DESTROYED.
- 2) TRANSMISSIONS WITHIN THE UNITED KINGDOM, EXCLUDING NORTHERN IRELAND, ARE LIMITED TO RESTRICTED. FOR CONFIDENTIAL AND ABOVE, CONTACT THE COMMUNICATIONS CENTRE ON EXT. 5957. TRANSMISSIONS TO NORTHERN IRELAND AND THE REST OF THE WORLD SHALL BE LIMITED TO UNCLASSIFIED ONLY.

**RECIPIENTS: IF THE TRANSMISSION IS INCOMPLETE OR ILLEGIBLE, CALL THE AWE FAX OFFICE ON 0118 982 5038 IN UK, INTERNATIONAL +44 118 982 5038**

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[REDACTED]

AWE

JOB #160

DATE	TIME	TO/FROM	MODE	MIN/SEC	PGS	STATUS
001	6/15 09:36	SCIENCE (NUCLEAR) 2	UF--S	06' 15"	015	OK

DATE

[REDACTED]

PROTECTIVE MARKING SHALL BE COMPLETED



FACSIMILE LEADER SHEET

From: [REDACTED] Bldg No. [REDACTED]  
 To: [REDACTED] Fax No. 0207 218 7400

AWE, Aldermaston, Reading, Berkshire, RG7 4PR.

Tel. 0118 981 4111  
Direct Tel. 0118 982 Ext.  
Fax. 0118 981 5320

TRANSMISSION COMPRISES 15 PAGE(S), INCLUDING THIS PAGE

Message

As per your fax

Signed: [REDACTED] Ext: 7497

ORIGINATORS

- 1) UNLESS THE ADJACENT BOX IS TICKED, THIS LEADER SHEET AND ANY ATTACHMENTS WILL BE DESTROYED.
- 2) TRANSMISSIONS WITHIN THE UNITED KINGDOM, EXCLUDING NORTHERN IRELAND, ARE LIMITED TO RESTRICTED. FOR CONFIDENTIAL AND ABOVE, CONTACT THE COMMUNICATIONS CENTRE ON EXT. 5857. TRANSMISSIONS TO NORTHERN IRELAND AND THE REST OF THE WORLD SHALL BE LIMITED TO UNCLASSIFIED ONLY.

RECIPIENTS: IF THE TRANSMISSION IS INCOMPLETE OR ILLEGIBLE, CALL THE AWE FAX OFFICE ON 0118 982 5038 IN UK, INTERNATIONAL +44 118 982 5038

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[REDACTED] PROTECTIVE MARKING

AWE

JOB #159

DATE	TIME	TO/FROM	MODE	MIN/SEC	PGS	STATUS
001	6/14 14:22	SCIENCE (NUCLEAR) 2	UF--S	01' 14"	004	OK

DATE

[REDACTED]

PROTECTIVE MARKING SHALL BE COMPLETED



FACSIMILE LEADER SHEET

From: [REDACTED] Bldg No. [REDACTED]  
 To: [REDACTED] Fax No. 0207 218 7400

AWE, Aldermaston, Reading, Berkshire, RG7 4PR.

Tel. 0118 981 4111  
Direct Tel. 0118 982 Ext.  
Fax. 0118 981 5320

TRANSMISSION COMPRISES 4 PAGE(S), INCLUDING THIS PAGE

Message

As requested dose records for [REDACTED]  
We have had no previous correspondence relating to him.

Signed: [REDACTED] Ext: 7497

ORIGINATORS

- 1) UNLESS THE ADJACENT BOX IS TICKED, THIS LEADER SHEET AND ANY ATTACHMENTS WILL BE DESTROYED.
- 2) TRANSMISSIONS WITHIN THE UNITED KINGDOM, EXCLUDING NORTHERN IRELAND, ARE LIMITED TO RESTRICTED. FOR CONFIDENTIAL AND ABOVE, CONTACT THE COMMUNICATIONS CENTRE ON EXT. 5957. TRANSMISSIONS TO NORTHERN IRELAND AND THE REST OF THE WORLD SHALL BE LIMITED TO UNCLASSIFIED ONLY.

RECIPIENTS: IF THE TRANSMISSION IS INCOMPLETE OR ILLEGIBLE, CALL THE AWE FAX OFFICE ON 0118 982 5038 IN UK, INTERNATIONAL +44 118 982 5038

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[REDACTED] PROTECTIVE MARKING

AWE

JOB #101

DATE	TIME	TO/FROM	MODE	MIN/SEC	PGS	STATUS
001	5/24 15:34	SCIENCE (NUCLEAR) 2	UF--S	01' 17"	004	OK

DATE



**PROTECTIVE MARKING SHALL BE COMPLETED**



**FACSIMILE LEADER SHEET**

From: Bldg No.

To: Fax No. 0207 217 7400

AWE, Aldermaston, Reading, Berkshire, RG7 4PR.

Tel. 0118 981 4111  
Direct Tel. 0118 982 Ext.  
Fax. 0118 981 5320

TRANSMISSION COMPRISES 4 PAGE(S), INCLUDING THIS PAGE

Message

*As per phone call.*

Signed: Ext: 7497

**ORIGINATORS**

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**RECIPIENTS: IF THE TRANSMISSION IS INCOMPLETE OR ILLEGIBLE, CALL THE AWE FAX OFFICE ON 0118 982 5038 IN UK, INTERNATIONAL +44 118 982 5038**

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Registration Number 02753022, Registered Office - AWE, Aldermaston, Reading, Berkshire, RG7 4PR.



**PROTECTIVE MARKING**

AWE

JOB #075

DATE	TIME	TO/FROM	MODE	MIN/SEC	PGS	STATUS
001	5/04 15:54	SCIENCE (NUCLEAR) 2	UF--S	00' 38"	002	OK

DATE

**PROTECTIVE MARKING  
SHALL BE COMPLETED**



**FACSIMILE LEADER SHEET**

From:  Bldg No.

To:  Fax No. 0207 218 7400

AWE, Aldermaston,  
Reading, Berkshire,  
RG7 4PR.

Tel. 0118 981 4111  
Direct Tel. 0118 982 Ext.  
Fax. 0118 981 5320

TRANSMISSION COMPRISES 2 PAGE(S), INCLUDING THIS PAGE

Message

ATTN.

Signed:  Ext: 7497

**ORIGINATORS**

- 1) UNLESS THE ADJACENT BOX IS TICKED, THIS LEADER SHEET AND ANY ATTACHMENTS WILL BE DESTROYED.
- 2) TRANSMISSIONS WITHIN THE UNITED KINGDOM, EXCLUDING NORTHERN IRELAND, ARE LIMITED TO RESTRICTED. FOR CONFIDENTIAL AND ABOVE, CONTACT THE COMMUNICATIONS CENTRE ON EXT. 6867. TRANSMISSIONS TO NORTHERN IRELAND AND THE REST OF THE WORLD SHALL BE LIMITED TO UNCLASSIFIED ONLY.

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Registration Number 02703922. Registered Office - AWE, Aldermaston, Reading, Berkshire, RG7 4PR.

**PROTECTIVE MARKING**

AWE

JOB #067

DATE	TIME	TO/FROM	MODE	MIN/SEC	PGS	STATUS
001	4/27 11:52	SCIENCE (NUCLEAR) 2	UF--S	00' 37"	002	OK

DATE

[REDACTED]

PROTECTIVE MARKING SHALL BE COMPLETED



FACSIMILE LEADER SHEET

From: [REDACTED] Bldg No. [REDACTED]  
 To: [REDACTED] Fax No. 0207 218 7400

AWE, Aldermaston, Reading, Berkshire, RG7 4PR.

Tel. 0118 981 4111  
 Direct Tel. 0118 982 Ext. 7497  
 Fax. 0118 982 5796

TRANSMISSION COMPRISES 2 PAGE(S), INCLUDING THIS PAGE 2 5796

Message

ATTN.

N.B. MY NEW FAX NO. IS 0118 982 5796  
 (THIS IS IN [REDACTED])

Signed: [REDACTED] Ext: 7497

ORIGINATORS

- 1) UNLESS THE ADJACENT BOX IS TICKED, THIS LEADER SHEET AND ANY ATTACHMENTS WILL BE DESTROYED.
- 2) TRANSMISSIONS WITHIN THE UNITED KINGDOM, EXCLUDING NORTHERN IRELAND, ARE LIMITED TO RESTRICTED. FOR CONFIDENTIAL AND ABOVE, CONTACT THE COMMUNICATIONS CENTRE ON EXT. 5967. TRANSMISSIONS TO NORTHERN IRELAND AND THE REST OF THE WORLD SHALL BE LIMITED TO UNCLASSIFIED ONLY.

RECIPIENTS: IF THE TRANSMISSION IS INCOMPLETE OR ILLEGIBLE, CALL THE AWE FAX OFFICE ON 0118 982 5038 IN UK, INTERNATIONAL +44 118 982 5038

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 Registration Number 02753302. Registered Office - AWE, Aldermaston, Reading, Berkshire, RG7 4PR.

[REDACTED] PROTECTIVE MARKING

AWE

JOB #049

DATE	TIME	TO/FROM	MODE	MIN/SEC	PGS	STATUS
001	4/14 14:26	01253 330437	EC--S	03' 01"	007	OK

TIME RECEIVED:  
DATE:



**PROTECTIVE MARKING  
SHALL BE COMPLETED**



**FACSIMILE LEADER SHEET**

From: Bldg No.   
 To: Fax No. 01253 330437

AWE, Aldermaston,  
Reading, Berkshire,  
RG7 4PR.

Tel. 0118 981 4111  
Direct Tel. 0118 982 Ext. 7497  
Fax. 0118 982 5038

TRANSMISSION COMPRISES 7 PAGE(S), INCLUDING THIS PAGE 2 5796

Message ATTACHED.  
Follows by post.

Signed: Ext: 7497

**ORIGINATORS**

- 1) UNLESS THE ADJACENT BOX IS TICKED, THIS LEADER SHEET AND ANY ATTACHMENTS WILL BE DESTROYED.
- 2) TRANSMISSIONS WITHIN THE UNITED KINGDOM, EXCLUDING NORTHERN IRELAND, ARE LIMITED TO RESTRICTED. FOR CONFIDENTIAL AND ABOVE, CONTACT THE COMMUNICATIONS CENTRE ON EXT. 5957. TRANSMISSIONS TO NORTHERN IRELAND AND THE REST OF THE WORLD SHALL BE LIMITED TO UNCLASSIFIED ONLY.

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 Registration Number 02783902. Registered Office - AWE, Aldermaston, Reading, Berkshire, RG7 4PR.





AWE

JOB #043

DATE	TIME	TO/FROM	MODE	MIN/SEC	PGS	STATUS
001	4/12 16:18	SCIENCE (NUCLEAR) 2	UF--S	02' 22"	005	OK

TIME RECEIVED:  
DATE:



PROTECTIVE MARKING  
SHALL BE COMPLETED



FACSIMILE LEADER SHEET

From: [Redacted] Bldg No. [Redacted]  
To: [Redacted] Fax No. 0121 218 7400

AWE, Aldermaston,  
Reading, Berkshire,  
RG7 4PR.

Tel. 0118 981 4111  
Direct Tel. 0118 982 Ext.  
Fax. 0118 981 5320

TRANSMISSION COMPRISES 5 PAGE(S), INCLUDING THIS PAGE

Message

*ATTN. DRAFT FOR COMMENT*

Signed: [Redacted] Ext: 7497

ORIGINATORS

- 1) UNLESS THE ADJACENT BOX IS TICKED, THIS LEADER SHEET AND ANY ATTACHMENTS WILL BE DESTROYED.
- 2) TRANSMISSIONS WITHIN THE UNITED KINGDOM, EXCLUDING NORTHERN IRELAND, ARE LIMITED TO RESTRICTED. FOR CONFIDENTIAL AND ABOVE, CONTACT THE COMMUNICATIONS CENTRE ON EXT. 5557. TRANSMISSIONS TO NORTHERN IRELAND AND THE REST OF THE WORLD SHALL BE LIMITED TO UNCLASSIFIED ONLY.

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Registration Number 02763002, Registered Office - AWE, Aldermaston, Reading, Berkshire, RG7 4PR.



AWE

JOB #042

DATE	TIME	TO/FROM	MODE	MIN/SEC	PGS	STATUS
001	4/12 15:51	001712180758	UF--S	00' 43"	002	OK

TIME RECEIVED.  
DATE:

[REDACTED]

**PROTECTIVE MARKING SHALL BE COMPLETED**



**FACSIMILE LEADER SHEET**

From: [REDACTED] Bldg No. [REDACTED]  
 To: [REDACTED] Fax No. 0171 218 0758

AWE, Aldermaston, Reading, Berkshire, RG7 4PR.

Tel. 0118 981 4111  
Direct Tel. 0118 982 Ext.  
Fax. 0118 981 5320

TRANSMISSION COMPRISES 2 PAGE(S), INCLUDING THIS PAGE

Message

MTD.

Signed: [REDACTED] Ext: 7497

**ORIGINATORS**

- 1) UNLESS THE ADJACENT BOX IS TICKED, THIS LEADER SHEET AND ANY ATTACHMENTS WILL BE DESTROYED.
- 2) TRANSMISSIONS WITHIN THE UNITED KINGDOM, EXCLUDING NORTHERN IRELAND, ARE LIMITED TO RESTRICTED. FOR CONFIDENTIAL AND ABOVE, CONTACT THE COMMUNICATIONS CENTRE ON EXT. 5957. TRANSMISSIONS TO NORTHERN IRELAND AND THE REST OF THE WORLD SHALL BE LIMITED TO UNCLASSIFIED ONLY.

**RECIPIENTS: IF THE TRANSMISSION IS INCOMPLETE OR ILLEGIBLE, CALL THE AWE FAX OFFICE ON 0118 982 5038 IN UK, INTERNATIONAL +44 118 982 5038**

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[REDACTED]



HUNTING - BRAE

COVERING [REDACTED]

## FAX TRANSMISSION FORM

**FROM: Dosimetry and Health Effects Group**

[REDACTED]  
**AWE Aldermaston  
READING RG7 4PR**

**Phone 0118 982 7496  
Fax 0118 982 4813**

Precedence		ROUTINE	
Date: <b>16 July 99</b>		Time: <b>09-45</b>	
Our Reference <b>AWE/HPRK/B/LET/DHEG/NTV/SN9933</b>		Your Reference:	
To: [REDACTED]		Fax Number: <b>0171 218 7400</b> (if this does not work try 1769)	
Copy to:		Fax Number:	
No of sheets sent including this one <b>8</b>			
<b>Message:</b>  As per your phone call: clean copy follows by post.			
<b>I AUTHORISE THE SENDING OF THIS FAX MESSAGE</b>			
Signed		[REDACTED]	



HUNTING - BRAE

COVERING [REDACTED]

## FAX TRANSMISSION FORM

**FROM:** **Dosimetry and Health Effects Group**  
[REDACTED]  
**AWE Aldermaston**  
**READING RG7 4PR**

**Phone** 0118 982 7496  
**Fax** 0118 982 4813

Precedence <b>ROUTINE</b>	
Date: <b>13 July 99</b>	Time: <b>13-15</b>
Our Reference <b>AWE/HPRK/B/LET/DHEG/NTV/SN9932</b>	Your Reference:
To: [REDACTED]	Fax Number: <b>0171 218 7400</b> (if this does not work try 1769)
Copy to:	Fax Number:
No of sheets sent including this one <b>7</b>	
<b>Message:</b> Would be grateful for your comments. Shall we circulate it or would you prefer to do this?.	
<b>I AUTHORISE THE SENDING OF THIS FAX MESSAGE</b>	
Signed	[REDACTED]



HUNTING - BRAE

COVERING [REDACTED]

## FAX TRANSMISSION FORM

**FROM: Dosimetry and Health Effects Group**

[REDACTED]  
**AWE Aldermaston  
READING RG7 4PR**

**Phone 0118 982 7496  
Fax 0118 982 4813**

Precedence <b>ROUTINE</b>	
Date: <b>30 June 99</b>	Time: <b>15-00</b>
Our Reference <b>AWE/HPRK/B/LET/DHEG/NTV/SN9930</b>	Your Reference:
To: [REDACTED]	Fax Number: <b>0171 218 7400</b> <b>(if this does not work try 1769)</b>
Copy to:	Fax Number:
No of sheets sent including this one <b>3</b>	
<b>Message:</b>  Refs on NZ ships as requested	
<b>I AUTHORISE THE SENDING OF THIS FAX MESSAGE</b>	
Signed	[REDACTED]



HUNTING - BRAE

COVERING [REDACTED]

## FAX TRANSMISSION FORM

**FROM:** Dosimetry and Health Effects Group

[REDACTED]  
AWE Aldermaston  
READING RG7 4PR

**Phone** 0118 982 7496  
**Fax** 0118 982 4813

Precedence		ROUTINE	
Date: 23 June 99		Time: 13-30	
Our Reference AWE/HPRK/B/LET/DHEG/NTV/SN9929		Your Reference:	
To: [REDACTED]		Fax Number: 0171 218 7400 (if this does not work try 1769)	
Copy to:		Fax Number:	
No of sheets sent including this one 2			
Message:			
<b>I AUTHORISE THE SENDING OF THIS FAX MESSAGE</b>			
Signed		[REDACTED]	



# FAX TRANSMISSION FORM

**FROM:** **Dosimetry and Health Effects Group**  
[REDACTED]  
**AWE Aldermaston**  
**READING RG7 4PR**

**Phone 0118 982 7496**

**Fax 0118 982 4813**

**COVERING** [REDACTED]

Precedence <b>ROUTINE</b>	
Date <b>23 June 1999</b>	Time <b>1330</b>
Our Reference: <b>AWE/HPRK/B/LET/DHEG/NTV(RN/AJM)/002</b>	Your Reference: <b>ZL 96 98 17 A</b> (widow YK 10 10 18 A)
To [REDACTED]	Fax Number <b>01253 330 437</b>
Copy to	Fax Number
No of Sheets sent including this one <b>5</b>	
<b>Message</b> As per phone conversation with [REDACTED]	
<b>I AUTHORISE THE SENDING OF THIS FAX MESSAGE</b>	
Signed	[REDACTED]



HUNTING - BRAE

COVERING [REDACTED]

## FAX TRANSMISSION FORM

**FROM: Dosimetry and Health Effects Group**

[REDACTED]  
AWE Aldermaston  
READING RG7 4PR

**Phone 0118 982 7496**  
**Fax 0118 982 4813**

Precedence		ROUTINE	
Date: 21 June 99		Time: 14-00	
Our Reference AWE/HPRK/B/LET/DHEG/NTV/SN9928		Your Reference:	
To: [REDACTED]		Fax Number: 0171 218 7400 (if this does not work try 1769)	
Copy to:		Fax Number:	
No of sheets sent including this one 1			
Ref: meeting on Tues 29/6.			
[REDACTED] is here all day. He prefers a.m. as he has a meeting p.m. (though he could miss it if absolutely necessary).			
I will be here all day. I am on leave Mon 28th.			
<b>I AUTHORISE THE SENDING OF THIS FAX MESSAGE</b>			
Signed		[REDACTED]	





HUNTING - BRAE

COVERING [REDACTED]

## FAX TRANSMISSION FORM

**FROM: Dosimetry and Health Effects Group**  
[REDACTED]  
**AWE Aldermaston**  
**READING RG7 4PR**

**Phone 0118 982 7496**  
**Fax 0118 982 4813**

Precedence		ROUTINE	
Date: 18 June 99		Time: 09-15	
Our Reference AWE/HPRK/B/LET/DHEG/NTV/SN9927		Your Reference:	
To: [REDACTED]		Fax Number: 0171 218 7400 (if this does not work try 1769)	
Copy to:		Fax Number:	
No of sheets sent including this one 2			
Email from [REDACTED] for reference			
<b>I AUTHORISE THE SENDING OF THIS FAX MESSAGE</b>			
Signed		[REDACTED]	



HUNTING - BRAE

COVERING [REDACTED]

## FAX TRANSMISSION FORM

FROM: **Dosimetry and Health Effects Group**

[REDACTED]  
**AWE Aldermaston  
READING RG7 4PR**

Phone **0118 982 7496**  
Fax **0118 982 4813**

Precedence		<b>ROUTINE</b>	
Date: <b>10 June 99</b>		Time: <b>10-00</b>	
Our Reference <b>AWE/HPRK/B/LET/DHEG/NTV/SN9926</b>		Your Reference:	
To: [REDACTED]		Fax Number: <b>0171 218 7400</b> (if this does not work try 1769)	
Copy to:		Fax Number:	
No of sheets sent including this one <b>2</b>			
<b>I AUTHORISE THE SENDING OF THIS FAX MESSAGE</b>			
Signed		[REDACTED]	



HUNTING - BRAE

COVERING [REDACTED]

## FAX TRANSMISSION FORM

**FROM: Dosimetry and Health Effects Group**  
[REDACTED]  
**AWE Aldermaston**  
**READING RG7 4PR**

**Phone 0118 982 7496**  
**Fax 0118 982 4813**

Precedence		ROUTINE	
Date: 1 June		Time: 14-45	
Our Reference AWE/HPRK/B/LET/DHEG/NTV/SN9925		Your Reference:	
To: [REDACTED]		Fax Number: 0171 218 7400 (if this does not work try 1769)	
Copy to:		Fax Number:	
No of sheets sent including this one 9			
<b>I AUTHORISE THE SENDING OF THIS FAX MESSAGE</b>			
Signed		[REDACTED]	



HUNTING - BRAE

COVERING [REDACTED]

## FAX TRANSMISSION FORM

Group

FROM: Dosimetry and Health Effects

[REDACTED]  
AWE Aldermaston  
READING RG7 4PR

Phone 0118 982 7496  
Fax 0118 982 4813

Precedence		<b>ROUTINE</b>	
Date: 20 May 1999		Time: 14-35	
Our Reference AWE/HPRK/B/LET/DHEG/NTV/SN9923		Your Reference: D/ACSA(N)/15/8/3	
To: [REDACTED]		Fax Number: 0171 218 7400 (if this does not work try 1769)	
Copy to:		Fax Number:	
No of sheets sent including this one 3			
<b>I AUTHORISE THE SENDING OF THIS FAX MESSAGE</b>			
Signed	[REDACTED]	[REDACTED]	[REDACTED]



HUNTING - BRAE

COVERING [REDACTED]

## FAX TRANSMISSION FORM

Group

FROM:

Dosimetry and Health Effects

[REDACTED]  
AWE Aldermaston  
READING RG7 4PR

Phone 0118 982 7496  
Fax 0118 982 4813

Precedence		ROUTINE	
Date: 29 April 1999		Time: 15-30	
Our Reference AWE/HPRK/B/LET/DHEG/NTV/SN9920		Your Reference:	
To [REDACTED]		Fax Number: 0171 218 7400 (if this does not work try 1769)	
Copy to:		Fax Number:	
No of sheets sent including this one 2			
<b>I AUTHORISE THE SENDING OF THIS FAX MESSAGE</b>			
Signed		[REDACTED]	



HUNTING - BRAE

COVERING [REDACTED]

## FAX TRANSMISSION FORM

FROM:

Dosimetry and Health Effects

Group

[REDACTED]  
AWE Aldermaston  
READING RG7 4PR

Phone 0118 982 7496

Fax 0118 982 4813

Precedence		ROUTINE	
Date: 22 April 1999		Time: 14-00	
Our Reference AWE/HPRK/B/LET/DHEG/NTV/SN9918		Your Reference:	
To: [REDACTED]		Fax Number: 0171 218 7400 (if this does not work try 1769)	
Copy to:		Fax Number:	
No of sheets sent including this one 3			
As per your phone call			
I AUTHORISE THE SENDING OF THIS FAX MESSAGE			
Signed	[REDACTED]	[REDACTED]	[REDACTED]



HUNTING - BRAE

COVERING [REDACTED]

## FAX TRANSMISSION FORM

Group

FROM:

Dosimetry and Health Effects

[REDACTED]  
AWE Aldermaston  
READING RG7 4PR

Phone 0118 982 7496  
Fax 0118 982 4813

Precedence		ROUTINE	
Date: 12 April 1999		Time: 11-00	
Our Reference AWE/HPRK/B/LET/DHEG/NTV/SN9915		Your Reference:	
To: [REDACTED]		Fax Number: 0171 218 7400 (if this does not work try 1769)	
Copy to:		Fax Number:	
No of sheets sent including this one 6			
As per your phone call			
I AUTHORISE THE SENDING OF THIS FAX MESSAGE			
Signed		[REDACTED]	



HUNTING - BRAE

COVERING [REDACTED]

## FAX TRANSMISSION FORM

FROM:

**Dosimetry and Health Effects Group**  
[REDACTED]

**AWE Aldermaston  
READING RG7 4PR**

Phone 0118 982 7496  
Fax 0118 982 4813

Precedence		<b>ROUTINE</b>	
Date: 25 February 1999		Time: 10-30	
Our Reference AWE/HPRK/B/LET/DHEG/NTV/SN9907		Your Reference:	
To: [REDACTED]		Fax Number: 0171 218 7400 (if this does not work try 1769)	
Copy to:		Fax Number:	
No of sheets sent including this one 5			
Refs on DDT, as per our phone conversation.			
<b>I AUTHORISE THE SENDING OF THIS FAX MESSAGE</b>			
Signed		[REDACTED]	





HUNTING - BRAE

COVERING [REDACTED]

## FAX TRANSMISSION FORM

**FROM:**

**Dosimetry and Health Effects Group**

[REDACTED]  
**AWE Aldermaston**

**READING RG7 4PR**

**Phone 0118 982 7496**

**Fax 0118 982 4813**

Precedence		<b>PRIORITY</b>	
Date: <b>9 February 1999</b>		Time: <b>09-00</b>	
Our Reference <b>AWE/HPRK/B/LET/DHEG/NTV/SN9905</b>		Your Reference: <b>D/ACSA(N)/15/8/4</b>	
To: [REDACTED]		Fax Number: <b>0171 218 7400</b> (if this does not work try 1769)	
Copy to:		Fax Number:	
No of sheets sent including this one <b>4</b>			
As per our phone conversation.			
<b>I AUTHORISE THE SENDING OF THIS FAX MESSAGE</b>			
Signed		[REDACTED]	



HUNTING - BRAE

COVERING [REDACTED]

## FAX TRANSMISSION FORM

FROM:

**Dosimetry and Health Effects Group**  
[REDACTED]

**AWE Aldermaston  
READING RG7 4PR**

Phone 0118 982 7496  
Fax 0118 982 4813

Precedence		ROUTINE	
Date: 3 February 1999		Time: 12-00	
Our Reference AWE/HPRK/B/LET/DHEG/NTV/SN9904		Your Reference:	
To: [REDACTED]		Fax Number: 0171 218 7400 (if this does not work try 1769)	
Copy to:		Fax Number:	
No of sheets sent including this one 10			
As per our phone conversation.			
<b>I AUTHORISE THE SENDING OF THIS FAX MESSAGE</b>			
Signed		[REDACTED]	



HUNTING - BRAE

COVERING [REDACTED]

## FAX TRANSMISSION FORM

FROM:

Dosimetry and Health Effects Group  
[REDACTED]

AWE Aldermaston  
READING RG7 4PR

Phone 0118 982 7496

Fax 0118 982 4813

Precedence		ROUTINE	
Date: 26 January 1999		Time: 10-30	
Our Reference AWE/HPRK/B/LET/DHEG/NTV/SN9903		Your Reference:	
To: [REDACTED]		Fax Number: 0171 218 7400	
Copy to:		Fax Number:	
No of sheets sent including this one 5			
As per our phone conversation. The attached is for discussion within AWE/MoD and not for release without [REDACTED] approval.			
<b>I AUTHORISE THE SENDING OF THIS FAX MESSAGE</b>			
Signed		[REDACTED]	



HUNTING - BRAE

COVERING [REDACTED]

## FAX TRANSMISSION FORM

FROM:

Dosimetry and Health Effects Group  
[REDACTED]

AWE Aldermaston  
READING RG7 4PR

Phone 0118 982 7496

Fax 0118 982 4813

Precedence		ROUTINE	
Date: 25 January 1999		Time: 15-15	
Our Reference AWE/HPRK/B/LET/DHEG/NTV/SN9902		Your Reference:	
To: [REDACTED]		Fax Number: 0171 218 7400	
Copy to:		Fax Number:	
No of sheets sent including this one 7			
As per our phone conversation			
<b>I AUTHORISE THE SENDING OF THIS FAX MESSAGE</b>			
Signed		[REDACTED]	



# FAX TRANSMISSION FORM

**FROM:** **Dosimetry and Health Effects Group**  
[REDACTED]  
**AWE Aldermaston**  
**READING RG7 4PR**

**Phone 0118 982 7496**

**Fax 0118 982 4813**

**COVERING** [REDACTED]

Precedence		PRIORITY	
Date	20 January 1999	Time	1330
Our Reference: AWE/HPRK/B/LET/DHEG/NTV(RAF/MHH)/001		Your Reference: LW 18 63 07 A	
To	[REDACTED]	Fax Number	01253 332 386
Copy to		Fax Number	
No of Sheets sent including this one		3	
<b>Message</b>  As per our phone conversation			
<b>I AUTHORISE THE SENDING OF THIS FAX MESSAGE</b>			
Signed	[REDACTED]	[REDACTED]	[REDACTED]



HUNTING - BRAE

COVERING [REDACTED]

## FAX TRANSMISSION FORM

FROM:

Dosimetry and Health Effects Group  
[REDACTED]

AWE Aldermaston  
READING RG7 4PR

Phone 0118 982 7496

Fax 0118 982 4813

Precedence		ROUTINE	
Date: 16 November 1998		Time: 14-15	
Our Reference AWE/HPRK/B/LET/DHEG/NTV/SN9858		Your Reference: D/ACSA(N)/15/8/4	
To [REDACTED]		Fax Number: 0171 218 7400	
Copy to:		Fax Number:	
No of sheets sent including this one 3			
<b>I AUTHORISE THE SENDING OF THIS FAX MESSAGE</b>			
Signed		[REDACTED]	



HUNTING - BRAE

COVERING [REDACTED]

## FAX TRANSMISSION FORM

FROM:

Dosimetry and Health Effects Group  
[REDACTED]

AWE Aldermaston  
READING RG7 4PR

Phone 0118 982 7496

Fax 0118 982 4813

Precedence		ROUTINE	
Date: 10 November 1998		Time: 15-30	
Our Reference AWE/HPRK/B/LET/DHEG/NTV/SN9856		Your Reference:	
To: [REDACTED]		Fax Number: 0171 218 7400	
Copy to:		Fax Number:	
No of sheets sent including this one 5			
I AUTHORISE THE SENDING OF THIS FAX MESSAGE			
Signed		[REDACTED]	



HUNTING - BRAE

COVERING [REDACTED]

## FAX TRANSMISSION FORM

FROM:

Dosimetry and Health Effects Group  
[REDACTED]

AWE Aldermaston  
READING RG7 4PR

Phone 0118 982 7496

Fax 0118 982 4813

Precedence		ROUTINE	
Date: 10 November 1998		Time: 14-30	
Our Reference AWE/HPRK/B/LET/DHEG/NTV/SN9855		Your Reference:	
To: [REDACTED]		Fax Number: 0171 218 7400	
Copy to:		Fax Number:	
No of sheets sent including this one 2			
Copy of letter as requested in your fax			
<b>I AUTHORISE THE SENDING OF THIS FAX MESSAGE</b>			
Signed		[REDACTED]	





COVERING [REDACTED]

## FAX TRANSMISSION FORM

FROM:

Dosimetry and Health Effects Group  
[REDACTED]

AWE Aldermaston  
READING RG7 4PR

Phone 0118 982 7496

Fax 0118 982 4813

Precedence		ROUTINE	
Date: 06 November 1998		Time: 14-30	
Our Reference AWE/HPRK/B/LET/DHEG/NTV/SN9854		Your Reference:	
To: [REDACTED]		Fax Number: 0171 218 7400	
Copy to:		Fax Number:	
No of sheets sent including this one 2			
Ref our phone convesation			
<b>I AUTHORISE THE SENDING OF THIS FAX MESSAGE</b>			
Signed		[REDACTED]	



HUNTING - BRAE



## FAX TRANSMISSION FORM

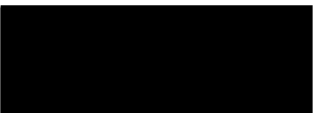

**FROM:**

**Dosimetry and Health Effects Group**

**AWE Aldermaston  
READING RG7 4PR**

**Phone 0118 982 7496**

**Fax 0118 982 4813**

Precedence		<b>ROUTINE</b>	
Date: <b>06 November 1998</b>		Time: <b>10-45</b>	
Our Reference <b>AWE/HPRK/B/LET/DHEG/NTV/SN9854</b>		Your Reference:	
To: 		Fax Number: <b>0171 218 7400</b>	
Copy to:		Fax Number:	
No of sheets sent including this one <b>6</b>			
This is n reply to your query about UK mortality rates. We could do a more detailed study if you require but this would take some time.			
<b>I AUTHORISE THE SENDING OF THIS FAX MESSAGE</b>			
Signed			



HUNTING - BRAE

Covering [REDACTED]

## FAX TRANSMISSION FORM

**FROM:**

**Dosimetry and Health Effects Group**  
[REDACTED]

**AWE Aldermaston  
READING RG7 4PR**

**Phone 0118 982 7496**

**Fax 0118 982 4813**

Precedence		<b>ROUTINE</b>	
Date: <b>22 October 1998</b>		Time: <b>16-00</b>	
Our Reference <b>AWE/HPRK/B/LET/DHEG/NTV/SN9851</b>		Your Reference:	
To: [REDACTED]		Fax Number: <b>0171 218 7400</b>	
Copy to:		Fax Number:	
No of sheets sent including this one <b>19</b>			
In reply to your phone call re [REDACTED]			
We have a lever-arch file going back to 1984 containing correspondence with DSS, NRPB, PQ's etc. I attach just a few of the recent items. I will photocopy the whole file and have it ready for you to collect next week. I am on leave Mon 26, Weds 28 and Mon 2 but I can leave it with someone in the office.			
<b>I AUTHORISE THE SENDING OF THIS FAX MESSAGE</b>			
Signed		[REDACTED]	



HUNTING - BRAE

Covering [REDACTED]

## FAX TRANSMISSION FORM

FROM:

Dosimetry and Health Effects Group  
[REDACTED]

AWE Aldermaston  
READING RG7 4PR

Phone 0118 982 7496  
Fax 0118 982 4813

Precedence		ROUTINE	
Date: 22 October 1998		Time: 14-00	
Our Reference AWE/HPRK/B/LET/DHEG/NTV/SN9850		Your Reference:	
To: [REDACTED]		Fax Number: 0171 218 7400	
Copy to:		Fax Number:	
No of sheets sent including this one 7			
In reply to your phone call re [REDACTED]			
<b>I AUTHORISE THE SENDING OF THIS FAX MESSAGE</b>			
Signed		[REDACTED]	



HUNTING - BRAE




## FAX TRANSMISSION FORM

**FROM:**

**Dosimetry and Health Effects Group**

**AWE Aldermaston  
READING RG7 4PR**

**Phone 0118 982 7496  
Fax 0118 982 4813**

Precedence		<b>ROUTINE</b>	
Date: <b>20 October 1998</b>		Time: <b>11-45</b>	
Our Reference <b>AWE/HPRK/B/LET/DHEG/NTV/SN9849</b>		Your Reference:	
To 		Fax Number: <b>0171 218 7400</b>	
Copy to:		Fax Number:	
No of sheets sent including this one <b>2</b>			
In reply to your phone call re DU in the Gulf			
<b>I AUTHORISE THE SENDING OF THIS FAX MESSAGE</b>			
Signed	