REVOKED

Revocation and Determination

of

Statement of Principles
concerning

NON MELANOTIC MALIGNANT NEOPLASM OF THE SKIN

ICD-9-CM CODE: 173

Veterans' Entitlements Act 1986

1.   The Repatriation Medical Authority under subsection **196B(3)** of the *Veterans' Entitlements Act 1986* (the Act):

   (a)   revokes Instrument No.32 of 1996; and

   (b)   determines in its place the following Statement of Principles.

Kind of injury, disease or death

2.   (a)   This Statement of Principles is about **non melanotic malignant neoplasm of the skin** and **death from non melanotic malignant neoplasm of the skin.**

   (b)   For the purposes of this Statement of Principles, **"non melanotic malignant neoplasm of the skin"** means a primary malignant neoplasm of the skin, including squamous cell carcinoma, basal cell carcinoma and Merkel cell carcinoma, but excluding melanoma, soft tissue sarcoma, lymphoma or Paget's disease of the skin, attracting ICD-9-CM code 173.

Basis for determining the factors

3.   On the sound medical-scientific evidence available, the Repatriation Medical Authority is of the view that it is more probable than not that **non melanotic malignant neoplasm of the skin and death from non**

melanotic malignant neoplasm of the skin can be related to relevant service rendered by veterans or members of the Forces.

Factors that must be related to service

4.   Subject to clause 6, at least one of the factors set out in clause 5 must be related to any relevant service rendered by the person.

Factors

5.   The factors that must exist before it can be said that, on the balance of probabilities, **non melanotic malignant neoplasm of the skin** or **death from non melanotic malignant neoplasm of the skin** is connected with the circumstances of a person's relevant service are:

(a)   For squamous cell carcinoma and basal cell carcinoma only,

(i)   receiving 50 or more PUVA treatments to the affected site, where the first treatment was administered at least five years before the clinical onset of non melanotic malignant neoplasm of the skin; or

(ii)   receiving a course of therapeutic radiation to the affected site at least 15 years before the clinical onset of non melanotic malignant neoplasm of the skin; or

(iii)   suffering from chronic radiodermatitis of the affected site at the time of the clinical onset of non melanotic malignant neoplasm of the skin; or

(iv)   suffering from chronic cutaneous scarring of the affected site at the time of the clinical onset of non melanotic malignant neoplasm of the skin; or

(v)   suffering from chronic cutaneous ulceration of the affected site at the time of the clinical onset of non melanotic malignant neoplasm of the skin; or

(vi)   suffering from a chronically infected cutaneous sinus tract at the affected site at the time of the clinical onset of non melanotic malignant neoplasm of the skin; or

(vii)   exposure of the affected site to mustard gas before the clinical onset of non melanotic malignant neoplasm of the skin; or

(b)   ingesting arsenic or arsenic containing compounds for at least 10 years, where ingestion commenced at least 20 years before the clinical onset of non melanotic malignant neoplasm of the skin; or

(c)   regularly consuming drinking water with arsenic content higher than 0.1 parts per million for at least 10 years, where consumption commenced at least 20 years before the clinical onset of non melanotic malignant neoplasm of the skin; or

(d)   being occupationally involved in the manufacturing or spraying of arsenic-containing pesticides, at least 10 years before the clinical onset of non melanotic malignant neoplasm of the skin; or

(e)   being treated with immunosuppressive drugs for organ transplantation before the clinical onset of non melanotic malignant neoplasm of the skin; or

(f)   having a solar UV damage factor ratio of at least 1.2; or

(g)   inability to obtain appropriate clinical management for non melanotic malignant neoplasm of the skin.

Factors that apply only to material contribution or aggravation

6.   Paragraph **5(g)** applies only to material contribution to, or aggravation of, non melanotic malignant neoplasm of the skin where the person's non melanotic malignant neoplasm of the skin was suffered or contracted before or during (but not arising out of) the person's relevant service; paragraph 8(1)(e), 9(1)(e) or 70(5)(d) of the Act refers.

Inclusion of Statements of Principles

7.   In this Statement of Principles if a relevant factor applies and that factor includes an injury or disease in respect of which there is a Statement of Principles then the factors in that last mentioned Statement of Principles apply in accordance with the terms of that Statement of Principles.

Other definitions

8.   For the purposes of this Statement of Principles:

"a course of therapeutic radiation" means one or more fractions (treatment portions) of ionising radiation administered with the aim of achieving palliation or cure with gamma rays, x-rays, alpha particles or beta particles;

"chronically infected cutaneous sinus tract" means the persistence of an abnormal, suppurating channel between an internal organ and the skin such as results from chronic osteomyelitis of bone;

"chronic cutaneous scarring" means the presence of a mark remaining after the healing of a wound or other morbid process affecting the skin, including scars due to thermal or burn injury, irradiation injury or chemical injury;

"chronic cutaneous ulceration" means the persistence of a localised defect or excavation of the skin produced by sloughing of inflammatory necrotic tissue;

"death from non melanotic malignant neoplasm of the skin" in relation to a person includes death from a terminal event or condition that was contributed to by the person's non melanotic malignant neoplasm of the skin;

"ICD-9-CM code" means a number assigned to a particular kind of injury or disease in the Australian Version of The International Classification of Diseases, 9th revision, Clinical Modification (ICD-9-CM), effective date of 1 July 1996, copyrighted by the National Coding Centre, Faculty of Health Sciences, University of Sydney, NSW, and having ISBN 0 642 24447 2;

"immunosuppressive drugs" means drugs or agents capable of suppressing immune responses;

"ingesting arsenic or arsenic containing compounds" means consuming arsenic through regular medicinal treatment with inorganic trivalent arsenic compounds such as Fowler's solution or Donovan's solution;

"mustard gas" means dichlorodiethylsulphide, and is also known as sulphur mustard and yellow cross liquid;

"PUVA treatments" means the therapeutic administration of oral psoralen plus long-wave ultraviolet radiation in the A range;

"radiodermatitis" means a cutaneous inflammatory reaction resulting from exposure to biologically effective levels of ionising radiation;

"relevant service" means:

(a)   eligible war service (other than operational service); or
(b)   defence service (other than hazardous service);

"terminal event" means the proximate or ultimate cause of death and includes:

     a)   pneumonia;
     b)   respiratory failure;
     c)   cardiac arrest;
     d)   circulatory failure; or
     e)   cessation of brain function;

"non-service UV damage factor" means the numerical value calculated by the formula:

$$[MED_{cum}(a,T)]^{\beta-1} \cdot \sum_{t-0}^{T} PAE(n,M,a) \text{ at age } (T-t) \cdot t^{\alpha-\beta}$$

for the person's entire life, with the PAE for each month of the person's period or periods of relevant service being the arithmetic mean of the PAE for each and every month of the person's life, other than the period or periods of relevant service, where:

    "α"   has the value of five and is a numerical constant associated with the age dependence of the cumulative incidence;

    "β"   has the value of two and is a biological amplification factor;

    "a"   is an anatomical body site;

    "M"   is a specified month of the year;

    "MED"   means minimal erythemal dose, where one MED is equal to 200 Joules of radiation per square metre of skin;

    "[MED$_{cum}$(a,T)]"   means the cumulative solar UV dose to the skin for any given anatomical body site for the person's age at the time of the assessment;

"n"   has the value specified in column 2 of Table 1 opposite the item in column 1 of that Table for each of the specified life activities set out in column 1:

Table 1—specified life activities

column 1	column 2
Service workday	1
Service weekend	2
Service recreation period one	3
Service recreation period two	4
Civilian workday	5
Civilian weekend	6
Civilian recreation period one	7
Civilian recreation period two	8

"PAE" means personal ambient exposure in MEDs, calculated for each and every month of a person's life based on an estimate of a typical month during each of the five year periods between the ages of 0 and 20 years and each of the ten year periods thereafter;

"PAE (n,M,a)" is the numerical value calculated by the formula:

$$\sum_{n-1}^{n-8} MAE\,(M,L_n) \cdot ABF_a \cdot EF_n \cdot TRF_n \cdot ESF_n \cdot CPF_n \cdot ERF_n \cdot W_n$$

where:

"ABF_a"   is the anatomical body factor, and has the value specified in column 2 of Table 2 opposite the item in column 1 of that Table for each of the various body sites set out in column 1:

Table 2—body sites

column 1	column 2
Face	0.15
Hand	0.25
Leg	0.25
Arm	0.40
Back	0.50

"CPF$_n$" is the clothing protection factor, and has the value assigned to a particular anatomical site proportionately according to the amount of protection provided by clothing and sun screen, ranging from a value of 1.00 for no protection to a value of 0.05 for full cover with heavy clothing for a given specified life activity in column 1 of Table 1;

"EF$_n$" is the exposure factor, and has the value specified in column 2 of Table 3 opposite the item in column 1 of that Table for different exposure situations set out in column 1:

Table 3—exposure situations

column 1	column 2
Indoor	0.10
Mainly indoor	0.20
Indoor and outdoor	0.35
Mainly outdoor	0.50
Outdoor	0.60

"ERF$_n$" is the environment reflectance factor, and has the value specified in column 2 of Table 4 opposite the item in column 1 of that Table for the different environment types set out in column 1:

Table 4—environment types

column 1	column 2
Urban	0.95
Rural	1.00
Maritime	1.00

where;

"Urban" means a location that is either a city or a town;

"Rural" means a location that is bushland, pastoral, or agricultural setting;

"Maritime" means either on the sea, lake, major river, or directly

"**ESF$_n$**"   is the environment shade factor, and has the value specified in column 2 of Table 5 opposite the item in column 1 of that Table for the different environment shade types set out in column 1:

Table 5—environment shade types

column 1	column 2
Dense shade	0.50
Moderate shade	0.70
Light shade	0.90
No shade	1.00

where:

"**Dense shade**"   means a location that is predominantly under dense shade, such as jungle or dense forest;

"**Moderate shade**" means a location that is predominantly under moderate shade, such as open forest or high density housing;

"**Light shade**"   means a location that is predominantly under light shade, such as lightly timbered country or low density housing;

"**No shade**"   means a location that is predominantly without shade, such as open fields, tundra, beach, or ocean;

"**MAE(M,L$_n$)**" is the average daily ambient exposure for month, M, in location, L, assuming a long term average cloud cover, being the value, obtained from the Table set out in Schedule

1, that is contained in the row that corresponds to the particular latitude (rounded to the nearest five degrees) and is contained in the column that corresponds to the month of the year that is the particular month under consideration, for each specified life activity;

"TRF_n" is the terrain reflectance factor, and has the value specified in column 2 of Table 6 opposite the item in column 1 of that Table for the different terrain types set out in column 1:

Table 6—terrain types

column 1	column 2
Brown	1.02
Black	1.04
Green	1.05
Open water	1.08
Sand	1.16
Snow	1.40

where:

"Black" means a terrain predominantly of black material such as asphalt;

"Brown" means a terrain predominantly of bare soil, clay, or buildings;

"Green" means a terrain predominantly of green vegetation;

"Open Water" means an environment surrounded by water;

"Sand" means a terrain predominantly of light material such as white or yellow sand;

"Snow" means a terrain that is predominantly covered in snow;

"**W_n**" is an estimate of the number of days in a month in which a specified life activity in column 1 of Table 1 is performed, and where, for the purposes of this definition, every month is taken to have 30.4375 days;

"**t**" is the age in months of the person for the particular specified activity;

"**T**" is the age in months of the person at the time of assessment;

> "**solar UV damage factor ratio**" means the value obtained by applying the solar UV damage factor ratio formula. This may be calculated by using the computer program, UV Risk Version 3.3 (created by the Australian Radiation Laboratory using Microsoft® Visual Basic™ Programming System for Windows™ Professional Edition, Version 3.0) to the data concerning the exposure of the person to ultra violet (UV) radiation;

> **Note:** (this note does not form part of the instrument) The computer program UV Risk Version 3.3 can be run on a personal computer with at least 8 megabytes of Random Access Memory, using the Microsoft® Windows™ version 3.1 graphical user interface. Further information may be obtained from the Department of Veterans' Affairs, PO Box 21, Woden ACT 2606.

"**solar UV damage factor ratio formula**" means:

$$\frac{\text{total lifetime UV damage factor}}{\text{non-service UV damage factor}}$$

"**total lifetime UV damage factor**" means the numerical value calculated by the formula:

$$[MED_{cum}(a,T)]^{\beta-1} \cdot \sum_{t-0}^{T} PAE(n,M,a) \text{ at age } (T-t) \cdot t^{\alpha-\beta}$$

for the person's entire life, where:

"**α**" has the value of five and is a numerical constant associated with the age dependence of the cumulative incidence;

"β" has the value of two and is a biological amplification factor;

"a" is an anatomical body site;

"M" is a specified month of the year;

"MED" means minimal erythemal dose, where one MED is equal to 200 Joules of radiation per square metre of skin;

"[MED $_{cum}$ (a,T)]" is the cumulative solar UV dose to the skin for any given anatomical body site for the person's age at the time of the assessment;

"n" has the value specified in column 2 of Table 7 opposite the item in column 1 of that Table for each of the specified life activities set out in column 1:

Table 7—specified life activities

column 1	column 2
Service workday	1
Service weekend	2
Service recreation period one	3
Service recreation period two	4
Civilian workday	5
Civilian weekend	6
Civilian recreation period one	7
Civilian recreation period two	8

"PAE" means personal ambient exposure in MEDs, calculated for each and every month of a person's life based on an estimate of a typical month during each of the five year periods between the ages of 0 and 20 years and each of the ten year periods thereafter;

"PAE (n,M,a)" means the numerical value calculated by the formula:

$$\sum_{n-1}^{n-8} MAE\,(M,L_n) \cdot ABF_a \cdot EF_n \cdot TRF_n \cdot ESF_n \cdot CPF_n \cdot ERF_n \cdot W_n$$

where:

"ABF$_a$"   is the anatomical body factor, and has the value specified in column 2 of Table 8 opposite the item in column 1 of that Table for each of the various body sites set out in column 1:

Table 8—body sites

column 1	column 2
Face	0.15
Hand	0.25
Leg	0.25
Arm	0.40
Back	0.50

"CPF$_n$"   is the clothing protection factor, and has the value assigned to a particular anatomical site proportionately according to the amount of protection provided by clothing and sun screen, ranging from a value of 1.00 for no protection to a value of 0.05 for full cover with heavy clothing for a given specified life activity in column 1 of Table 7;

"EF$_n$"   is the exposure factor, and has the value specified in column 2 of Table 9 opposite the item in column 1 of that Table for different exposure situations set out in column 1:

Table 9—exposure situations

column 1	column 2
Indoor	0.10
Mainly indoor	0.20
Indoor and outdoor	0.35
Mainly outdoor	0.50
Outdoor	0.60

"ERF$_n$"   is the environment reflectance factor, and has the value specified in column 2 of Table 10 opposite the item in column 1 of that Table for the different environment types set out in column 1:

Table 10—environment types

column 1	column 2
Urban	0.95
Rural	1.00
Maritime	1.00

where:

"Urban"   means a location that is either a city or a town;

"Rural"   means a location that is bushland, pastoral, or agricultural setting;

"Maritime" means either on the sea, lake, major river, or directly adjacent to such a body of water;

"ESF$_n$"   is the environment shade factor, and has the value specified in column 2 of Table 11 opposite the item in column 1 of that Table for the different environment shade types set out in column 1:

Table 11—environment shade types

column 1	column 2
Dense shade	0.50
Moderate shade	0.70
Light shade	0.90
No shade	1.00

where:

"Dense shade"   means a location that is predominantly under dense shade, such as jungle or dense forest;

"Moderate shade" means a location that is predominantly under moderate shade, such as open forest or high density housing;

"Light shade"	means a location that is predominantly under light shade, such as lightly timbered country or low density housing;
"No shade"	means a location that is predominantly without shade, such as open fields, tundra, beach, or ocean;

"MAE(M,L$_n$)" is the average daily ambient exposure for month, M, in location, L, assuming a long term average cloud cover, being the value, obtained from the Table set out in Schedule 1, that is contained in the row that corresponds to the particular latitude (rounded to the nearest five degrees) and is contained in the column that corresponds to the month of the year that is the particular month under consideration, for each specified life activity;

"TRF$_n$" is the terrain reflectance factor, and has the value specified in column 2 of Table 12 opposite the item in column 1 of that Table for the different terrain types set out in column 1:

Table 12—terrain types

column 1	column 2
Brown	1.02
Black	1.04
Green	1.05
Open water	1.08
Sand	1.16
Snow	1.40

where:

"Black"	means a terrain predominantly of black material such as asphalt;

"Brown" means a terrain predominantly of bare soil, clay, or buildings;

"Green" means a terrain predominantly of green vegetation;

"Open Water" means an environment surrounded by water;

"Sand" means a terrain predominantly of light material such as white or yellow sand;

"Snow" means a terrain that is predominantly covered in snow;

"W_n" is an estimate of the number of days in a month in which a specified life activity in column 1 of Table 7 is performed, and where, for the purposes of this definition, every month is taken to have 30.4375 days;

"t" is the age in months of the person for the particular specified activity;

"T" is the age in months of the person at the time of assessment.

Application

9.   This Instrument applies to all matters to which section 120B of the Act applies.

Dated this *Twenty-ninth* day of *June* 1998

The Common Seal of the   )
Repatriation Medical Authority   )
was affixed to this instrument   )
in the presence of:)

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KEN DONALD
CHAIRMAN

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Schedule 1

Average daily MED calculated for the given month and latitude
Data assume long-term average cloud cover

Latitude	January	February	March	April	May	June	July	August	September	October	November	December
85°N	0.00	0.10	0.10	0.10	0.10	1.00	1.00	0.10	0.10	0.10	0.10	0.00
80°N	0.00	0.10	0.20	1.00	2.00	3.00	3.00	2.00	0.50	0.10	0.10	0.00
75°N	0.00	0.10	0.50	2.00	3.00	5.00	5.00	3.00	1.00	0.20	0.10	0.00
70°N	0.00	0.21	0.90	2.95	5.81	7.83	8.01	5.17	1.97	0.44	0.07	0.00
65°N	0.21	0.62	1.66	4.13	7.06	9.42	9.49	6.72	3.11	1.08	0.35	0.18
60°N	0.41	1.03	2.42	5.30	8.32	11.11	11.05	8.38	4.28	1.72	0.60	0.35
55°N	0.62	1.44	3.18	6.48	9.94	12.71	12.71	10.14	5.76	2.61	0.90	0.53
50°N	0.82	1.85	3.95	7.66	11.66	14.37	14.46	12.01	7.37	3.64	1.22	0.71
45°N	1.97	3.46	5.97	9.67	13.35	16.25	15.98	14.68	9.69	5.62	2.67	1.79
40°N	3.12	5.06	7.99	11.68	15.03	18.24	17.51	17.60	12.15	7.66	4.28	2.87
35°N	4.51	7.00	10.45	14.18	17.56	20.58	19.72	19.54	14.74	9.94	6.00	4.24
30°N	6.03	9.10	13.07	16.81	20.25	23.07	22.03	21.48	17.48	12.35	7.86	5.76
25°N	8.86	12.36	16.41	19.68	22.04	22.89	21.58	21.17	18.59	14.74	10.39	8.38
20°N	11.77	15.73	19.91	22.69	23.88	22.68	21.10	20.72	19.57	17.14	12.91	11.01
15°N	14.02	17.69	20.55	21.94	21.88	19.98	19.14	19.27	18.72	17.51	14.81	13.06
10°N	16.07	19.41	20.93	21.04	19.83	17.38	17.26	17.81	17.65	17.47	16.35	14.87
5°N	17.89	19.98	20.28	19.82	18.20	16.31	16.42	17.37	18.68	18.38	17.09	16.49
Equator	19.58	20.35	19.50	18.60	16.65	15.23	15.58	16.93	19.73	19.28	17.73	18.03
5°S	19.41	20.20	19.64	19.81	17.95	16.49	17.39	19.53	22.03	21.63	20.12	19.16
10°S	19.07	20.03	19.76	20.67	18.58	16.95	18.39	21.54	24.12	24.05	22.67	20.16
15°S	23.08	23.28	22.11	19.86	15.96	14.10	15.46	18.73	22.52	24.21	24.43	23.55
20°S	25.26	24.18	21.92	17.36	12.73	10.81	11.94	15.38	19.95	24.03	26.40	25.74
25°S	25.63	23.95	20.30	14.64	9.97	7.91	8.76	11.77	16.29	20.70	24.36	25.80
30°S	25.96	23.59	18.60	11.97	7.32	5.25	5.85	8.45	12.87	17.56	22.39	25.85
35°S	22.99	20.31	15.45	9.42	5.53	3.99	4.38	6.46	10.23	14.48	19.13	22.54
40°S	20.18	17.23	12.51	7.06	3.90	2.80	3.05	4.66	7.82	11.66	16.13	19.45
45°S	17.42	14.15	9.57	5.00	2.62	1.79	2.00	3.29	5.90	9.57	13.77	16.92
50°S	15.74	12.14	7.43	3.18	1.30	0.75	0.90	1.87	4.15	7.68	12.20	15.53
55°S	14.16	10.46	6.08	2.49	1.00	0.57	0.67	1.46	3.40	6.68	10.87	13.99
60°S	12.57	8.78	4.74	1.80	0.69	0.38	0.45	1.04	2.64	5.68	9.53	12.45
65°S	10.98	7.09	3.39	1.11	0.38	0.19	0.22	0.62	1.89	4.68	8.20	10.92
70°S	9.40	5.41	2.05	0.42	0.08	0.00	0.00	0.21	1.14	3.68	6.86	9.38
75°S	6.00	3.00	1.00	0.20	0.10	0.00	0.00	0.10	1.00	2.50	4.00	5.00
80°S	3.00	1.50	0.50	0.10	0.10	0.00	0.00	0.00	0.50	1.50	1.50	2.00
85°S	1.00	0.50	0.10	0.10	0.10	0.00	0.00	0.00	0.10	1.00	1.00	2.00