

Safe Work Method Statement

Job Task Summary:

Operations during weather extremes

- includes heat and/or humidity, cold, wet weather, snow, high wind / storms, fires, floods and poor air quality (eg. dust or smoke)

Can this involve High Risk Construction Work?

Where there is a risk of a person falling more than two metres?	Yes
At workplaces where there is any movement of powered mobile plant?	Yes
Involving demolition of an element of a structure that is load-bearing	No

Excludes:

Applicable to the following worker type: employee, contractor, volunteer

SWMS completed by: Tony Griffiths. Review and updated by Marcus Punch August 2021. Read in conjunction with other relevant [SWMS](#).

Site: All sites. In addition, it is mandatory to conduct a [Safety 5](#).

Date: 31st August 2021

PPC (Mandatory): DRA field clothing including DRA long sleeve shirt, non-synthetic trousers, safety boots or safety gumboots (AS 2210.1.2010 Operational Protective Footwear), non-synthetic layers or outer clothing for warmth (if required).

Other PPE as required by relevant SWMS/Safety 5.



Safe Work Method Statement

DRA Policies

1. DRA acknowledges the potential for injuries induced by extreme weather during field operations especially the effects of limited acclimatisation.
2. DRA will provide induction, information, training in recognising and preventing the onset of such injuries and supervision of this SWMS.
3. DRA will train its personnel in the provision of relevant first aid.
4. DRA will issue appropriate PPE and clothing commensurate with expected weather conditions.

Safe Work Method Statement

R1 Risk without controls

R2 Risk with controls

Procedural step(s)	Possible hazard(s)	R1	Safety control(s)	Person responsible	R2
Operational planning	Exposure to extreme events		<p>Planning acknowledges limited opportunities for acclimatisation especially for members from differing climatic areas</p> <p>Medically screen members for deployment</p> <p>Ensure deployment instructions include requirements for appropriate personal clothing</p> <p>Consider the use of hired or contracted light plant</p> <p>Provision of climate-controlled accommodation and rest areas, laundry and drying facilities</p> <p>Provision of in-field shelter if practicable</p> <p>Provision of adequate catering arrangements</p>	NPM/ NMM/ National Medical Director/ NLM	
Prior to deployment to the field	Exposure to extreme events		<p>In the event that extreme conditions have developed, are predicted to develop during the day, or the possibility has become otherwise apparent, a decision should be made, at the start of the day, as to whether to proceed to the work site.</p> <p>The decision should be based upon what is reasonable in the circumstances, taking account of:</p> <ul style="list-style-type: none"> - Forecasts, including the advice or directives received from authorities regarding the event and the precautions that should be taken, - The nature and severity of the extreme event, - The health and fitness of the workers, - Preparedness of the work team for the effects of the event, - Activities to be conducted that might increase the risk to workers (eg. use of plant near electrical storm activity, mobile plant use on wet or boggy ground), - The location of the work site, the ability to escape the event and the proximity to adequate shelter or safe haven. <p>If a decision is taken to deploy to the work site then that decision should be reviewed regularly during the day as circumstances develop.</p>	MC/Safety Officer/STL/ workers	

Safe Work Method Statement

<p>During field operations</p>	<p>Heat injuries (eg. heatstroke)</p>	<p>Monitor forecast and actual conditions using the BOM estimates or suitable Apps.</p> <p>Routinely monitor changing weather conditions, paying close attention to temperature and humidity on worksites</p> <p>Schedule outdoor work at the coolest time of day, either early morning or after sunset.</p> <p>Avoid strenuous physical activity during extreme weather</p> <p>Enforce work and rest breaks in accordance with the tables at the end of this document.</p> <p>Reduce the intensity of work when the Wet Bulb Globe Temperature (WBGT) exceeds 30°C (eg.30°C with more than 50% humidity, 35°C with more than 25% humidity, 40°C with more than 10% humidity).</p> <p>Working in conditions where the WBGT exceeds 32°C (eg.30°C with more than 75% humidity, 35°C with more than 35% humidity, 40°C with more than 20% humidity) should be avoided altogether, or if undertaken, should be as light as possible and subject to an additional Safety 5 risk assessment and additional safeguards as necessary.</p> <p>Note: The temperature and humidity measurements needed to estimate WBGT can be obtained from a smart phone.</p> <p>Consider using this Heat Stress Calculator or a suitable App.</p> <p>Supervise staff to ensure compliance with measures including:</p> <ul style="list-style-type: none"> • Adequate periods of rest in a controlled climate • Adequate meals • Limitations on alcohol intake • Intake of water before, during and after work • Application of sunscreen and wearing of appropriate clothing and headwear <p>Monitor the health of staff at all times during the working day</p> <p>Never allow workers to work alone</p>	<p>MC/Safety Officer/STL/workers</p>
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Safe Work Method Statement

During field operations	Dehydration		<p>Strenuous work in hot and humid weather may require a worker to drink one (1) litre or more per hour as they work. Workers should be encouraged to prevent dehydration by drinking water upon rising in the morning, regularly during the day, after each urination and in the evening.</p> <p>It is considered normal to urinate six (6) to eight (8) times in a 24 hr period. That is, once every three (3) to four (4) hours. Dehydration is often indicated by a darkening of the urine. Encourage workers to monitor the <u>colour of their urine</u> and the time elapsed since their last urination. An indicative chart is provided at the end of this document. Any worker who has dark yellow urine is dehydrated and should be rested and encouraged to drink water immediately before returning to work. Any worker whose urine is dark orange or brown is severely dehydrated and must be stopped from working until they are rehydrated and their urine returns to a normal colour.</p>	MC/Safety Officer/STL/workers	
	Lightning strike		<p>Do</p> <ul style="list-style-type: none"> • Familiarise the team with the SWMS Operations during weather extremes • Monitor forecasts and conditions • Have a plan which is communicated to all • Alert supervisors and fellow members when lightning or thunder is detected • Identify locations to safely shelter within close proximity of the worksite. Safe shelters include: <ul style="list-style-type: none"> o Fully enclosed large permanent structures or substantial buildings; or o Enclosed 'hard-top' (metal-bodied) vehicles. • Check in with all your workers after the thunderstorm has passed. <p>Caution</p> <ul style="list-style-type: none"> - Never seek shelter in temporary structures, sheds, buildings with unearthened metal roofs, or under trees. - Avoid bodies of water and metal objects such as fencing that may conduct electricity. 		

Safe Work Method Statement

			<ul style="list-style-type: none"> - When sheltering (including inside a vehicle), avoid contact with the external surfaces, metal objects such as pipes, wiring, metal parts of the vehicle, and avoid using plugged in electrical equipment. - Workers who are caught away from shelter should: <ul style="list-style-type: none"> o Avoid being on the highest point in an open area or near tall objects, but do not lie flat on the ground. o Crouch (alone) with your feet together, preferably in a ditch or hollow so you are not the highest object. o Remove all metal objects from your body. 		
	Ultraviolet radiation		Ensure availability and supervision of sun safe practices including clothing, sunscreen and headwear.		
	Cold injuries (eg. hypothermia).		<p>Listen to the weather forecast and monitor current conditions including the wind chill.</p> <p>Plan ahead: schedule warm-up breaks for outdoor workers, hold recess and breaks inside, limit the amount of time you spend outdoors.</p> <p>Dress warmly in layers (wind-resistant jacket, gloves, boots, hat/beanie).</p> <p>Stay dry (wet clothing chills the body rapidly).</p> <p>Provide hot food and drinks</p> <p>Get out of the cold as soon as you can if you start feeling cold.</p> <p>Alcohol, cigarettes, caffeine and certain medical conditions and medications will increase your susceptibility to cold.</p> <p>Monitor fellow workers for symptoms</p> <p>Other risks which may be contributed to by cold and wet conditions:</p> <ul style="list-style-type: none"> - Slips, trips and falls - Dehydration 		
	Prolonged wet weather -		<p>Inspecting the work site to ensure ground stability has not been compromised and foundations are secure.</p> <p>Spreading crushed rock on walkways, over mud and placing boot scrapers at access points.</p>		

Safe Work Method Statement

	<p>increased risk of slips, trips and falls</p> <p>Increased risk of vehicle and mobile plant operations</p> <p>Increased instability of trees</p>		<p>Ensuring plant operators are aware of the risk posed by waterlogged ground before they begin work.</p> <p>Ensuring electrical equipment that has potentially been affected by water is taken out of service until inspected, tested and made safe.</p> <p>Identifying soft ground and marking it with flags, bollards or other indicators as a warning to workers.</p> <p>Seeking assistance when recovering bogged equipment</p> <p>Provision of adequate washing and drying facilities/arrangements</p> <p>Increasing caution working and parking of vehicles around trees</p>		
	<p>Prolonged bushfire smoke resulting in poor air quality</p>		<p>DRA will conduct pre-deployment screening to help identify members who may be sensitive to poor air quality including:</p> <ul style="list-style-type: none"> ● people older than 65 ● people with heart and lung conditions, including asthma ● people with diabetes ● pregnant women <p>IMT to include air quality considerations in medical and safety plans</p> <p>IMT to monitor air quality:</p> <p><i>Air Quality Indexes</i></p> <ul style="list-style-type: none"> ● Northern Territory ● Queensland ● New South Wales ● Australian Capital Territory ● Western Australia ● Victoria ● South Australia ● Tasmania 	<p>NPM/ NMD/ NMM</p> <p>IMT/ Safety Officer/ STL/ workers</p>	

Safe Work Method Statement

			<p>Consider adjustments to time outdoors and workload by following the advice here when air quality reaches poor, very poor or hazardous.</p> <p>Ensure there are arrangements for air-conditioned locations including vehicles (if not at accommodation) for respite.</p> <p>Ensure the use and regular replacement of P2/N95 masks¹ noting that members with facial hair will not achieve a seal.</p> <p>Take action immediately should members display respiratory symptoms. Anyone with persistent symptoms should seek medical advice or call Health Direct Australia on 1800 022 222.</p>		
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¹ Noting this is the last line of defence

Safe Work Method Statement

Wet Bulb Globe Temperature (WBGT) from Temperature and Relative Humidity																
Temperature in Degrees Celsius																
	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50
0	14.8	16.1	18.0	18.6	19.8	21.1	22.3	23.5	24.7	25.8	27.0	28.1	29.3	30.3	31.4	32.5
5	15.3	16.7	18.7	19.4	20.7	22.0	23.3	24.6	25.9	27.2	28.4	29.6	30.9	32.2	33.4	34.6
10	16.0	17.4	19.4	20.2	21.6	23.0	24.3	25.7	27.1	28.4	29.7	31.1	32.4	33.8	35.1	36.4
15	16.5	18.0	20.1	20.9	22.4	23.8	25.2	26.7	28.1	29.6	31.0	32.4	33.8	35.2	36.7	38.1
20	17.1	18.7	20.8	21.6	23.1	24.6	26.2	27.7	29.2	30.6	32.1	33.6	35.1	36.6	38.2	39.7
25	17.6	19.3	21.4	22.3	24.0	25.5	27.0	28.6	30.1	31.7	33.2	34.8	36.3	37.9	39.5	
30	18.2	19.8	22.0	23.0	24.6	26.2	27.8	29.4	31.0	32.7	34.2	35.9	37.4	39.1		
35	18.7	20.3	22.6	23.6	25.3	26.9	28.6	30.2	31.9	33.5	35.2	36.8	38.5			
40	19.3	20.9	23.2	24.3	26.0	27.6	29.4	31.0	32.7	34.4	36.1	37.8	39.5			
45	19.7	21.5	23.8	24.9	26.6	28.3	30.1	31.8	33.5	35.2	37.0	38.7				
50	20.2	22.0	24.3	25.5	27.3	29.0	30.8	32.5	34.3	36.1	37.9	39.6				
55	20.7	22.4	24.8	26.0	27.8	29.6	31.4	33.3	35.0	36.8	38.6					
60	21.1	22.9	25.4	26.6	28.4	30.2	32.1	34.0	35.7	37.5	39.4					
65	21.6	23.2	25.9	27.1	29.0	30.9	32.7	34.5	36.4	38.2						
70	22.1	23.9	26.4	27.6	29.4	31.4	33.3	35.1	37.0	38.9						
75	22.5	24.4	26.9	28.2	30.1	32.0	33.8	35.8	37.7	39.5						
80	22.9	24.8	27.4	28.7	30.6	32.5	34.4	36.3	38.2							
85	23.3	25.2	27.8	29.2	31.1	33.0	35.0	36.9	38.9							
90	23.7	25.7	28.3	29.6	31.6	33.5	35.5	37.5	39.5							
95	24.2	26.1	28.7	30.1	32.0	34.0	36.0	38.0	40.0							
100	24.5	26.5	29.1	30.5	32.5	34.5	36.5	38.5								

NOTE: This chart is calculated using temperature and humidity, assuming a very clear sky (maximal solar load), and atmospheric pressure of 1ATA (760 mmHg). Chart A was developed by Professor Yoram Epstein to be used in Ariel's Checklist for hikers in Israel.

Heat Stress Category (WBGT)	Moderate Work		Hard Work	
	Work/Rest Cycle	Water Intake Per Hour	Work/Rest Cycle	Water Intake Per Hour
White ≤76.9°F (≤24.9°C)	60/15 MINUTES	300 ml (1/3 qt)	40/20 MINUTES	500 ml (1/2 qt)
Green 77-81.9°F (25-27.7°C)	60/15 MINUTES	750 ml (3/4 qt)	40/20 MINUTES	1000 ml (1 qt)
Yellow 82-84.9°F (27.8-29.4°C)	40/20 MINUTES	1000 ml (1 qt)	30/30 MINUTES	1000 ml (1 qt)
Red 85-88.9°F (29.5-31.6°C)	30/30 MINUTES	1000 ml (1 qt)	Exercise is forbidden. Very high risk for heat casualties.	
Black ≥89°F (≥31.7°C)	Exercise is forbidden. Very high risk for heat casualties.			

Safe Work Method Statement

Urine colour chart

This urine colour chart will give you an idea of whether a person is drinking enough or is dehydrated (lost too much water from the body).

ARE YOU DRINKING ENOUGH?



- Very dehydrated
- Drink a large bottle of water immediately



- Dehydrated
- Drink 2-3 glasses of water now



- Somewhat dehydrated
- Drink a large glass of water now



- Hydrated – you are drinking enough
- Keep drinking at the same rate

Be Aware! If you are taking single vitamin supplements or a multivitamin supplement, some of the vitamins in the supplements can change the colour of the urine for a few hours, making it bright yellow or discoloured.

Safe Work Method Statement

OTHER JOB REQUIREMENTS			
List staff skills/competencies and licences required for safe job performance:			
<input checked="" type="checkbox"/>	Training in Operations during weather extremes and first aid		
<input type="checkbox"/>			
List items of plant/equipment/tools required:			
<input type="checkbox"/>			
Relevant codes of practice, legislation standards or critical risk controls that may be applicable:			
<input checked="" type="checkbox"/>	Relevant codes of practice, legislation standards or critical risk controls that may be applicable: as adopted by State and territory jurisdictions (less WA and Vic) ²		
<input checked="" type="checkbox"/>	Safework Australia - Managing the risks of working in heat: Guidance material 2021		
<input checked="" type="checkbox"/>	Safework Australia - Guide on exposure to solar ultraviolet radiation (UVR): National Guidance		
<input checked="" type="checkbox"/>	Worksafe Queensland – Heat Stress		
<input checked="" type="checkbox"/>	Commonwealth Bureau of Meteorology - Thermal Stress		
<input checked="" type="checkbox"/>	Australian Department of Health - Advice on the use of masks for those exposed to bushfire smoke		
<input checked="" type="checkbox"/>	Safework Australia - Bushfires and air pollution		
<input checked="" type="checkbox"/>	Worksafe Victoria - Health risks of outdoor work in areas impacted by bushfire smoke		
Maintenance checks, site/workplace inspections required:			
Additional approvals, certificates, WorkCover approvals/permits required e.g. confined spaces, working at heights, hot works etc: N/A <input checked="" type="checkbox"/>			
Has a risk assessment been completed for any work involving confined spaces, electrical work or diving work			
	Yes	No	N/A <input checked="" type="checkbox"/>

² A court may rely on the codes as evidence of whether you took reasonably practicable steps to ensure the health and safety of your workers. In Victoria, the codes (known as compliance codes) are legally binding. You should follow the codes at all times



Safe Work Method Statement

Approvals

This SWMS is approved by DRA National Director of Field Operations

Name	Signature	Date

Site SWMS Approval (Strike Team Leader/ Supervisor i.e. person responsible for ensuring compliance with SWMS)

I have read and understand this SWMS. I have completed a site risk assessment with team members and will ensure compliance with the SWMS.

Name:	Signature:	Date:
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Operator/team confirmation

I have read and understand this Safe Work Method Statement. I have no medical conditions that may affect my ability to operate the vehicle.

NAME	SIGNATURE	DATE

Safety Officer confirmation (or Operations Chief in lieu)

I confirm that the safety controls detailed above are in place or will be acted upon. I can confirm that proposed tasks are within the scope of operations and that plant operators (if applicable) are duly authorised by the National Training Manager.

No

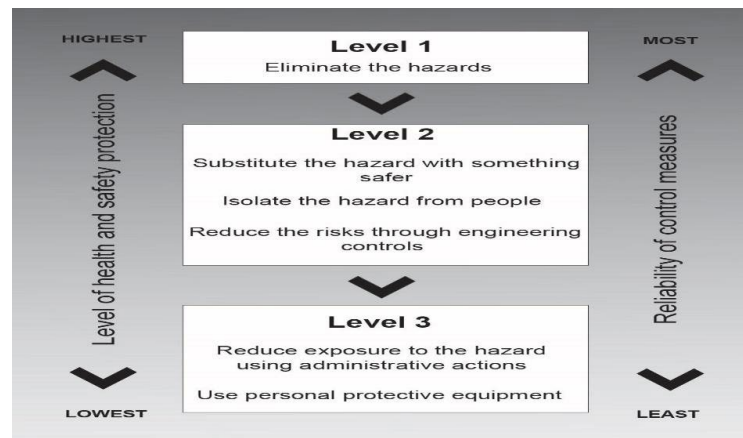
NAME	SIGNATURE	DATE

Safe Work Method Statement

WHS RISK MATRIX

	Minor	Moderate	Substantial	Major	Catastrophic
Almost Certain	Medium	High	High	Extreme	Extreme
Likely	Medium	Medium	High	Extreme	Extreme
Possible	Low	Medium	High	High	Extreme
Unlikely	Low	Low	Medium	High	High
Very Unlikely	Low	Low	Medium	Medium	High

HIERARCHY OF CONTROLS



Acknowledgements:

NSW Government – Department of Industry\
NSW Government – Department of Primary Industries
Health and Safety handbook - Portner Press