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VARIATION RECORD:

Version No.	Version Date:	Brief Description of Change:
1.0	July 2008	Original issue.
1.1	October 2008	Updated as per the Port's document style conventions – content remains unchanged.
1.2	September 2009	Contents reviewed and amendments made.
1.3		DRAFT.
1.4	February 2011	Definitions and creation of acknowledgement section.
2.0	July 2013	Complete review of SOP. Inclusion of definition of time of day effect. Additional guidelines for night shift and rostered days off.
2.1	February 2015	Reissue as Kimberley Ports Authority and changed to HSE Coordinator.
3.0	December 2016	Full review with major changes including: • Reference to Fitness for Work Policy Statement; • Inclusion of Operations Officer responsibilities into procedure; • Inclusion of heat management in plan and change of title; • Separation of general fatigue hazards and shift specific fatigue hazards; and • Changes to guidelines around rostered days off.
3.1	February 2019	Minor changes including clarification around hours for night shift in section 5.5 and 5.6, change to 5.6 notification procedures for exceeding 12 hours and clarification in 5.7 regarding days off for stevedores.

1. INTRODUCTION

1.1. Purpose

To provide all employees at all levels of the organisation with strategies to manage personal fatigue and heat risks, guidelines for recognising fatigue and heat stress in yourself and others and managing fatigue and heat related risks at work. This plan is to be read in conjunction with the Fitness for Work Policy Statement

1.2. Scope

This plan covers the requirements associated with:

- managing heat in the workplace; and
- working hours and the breaks between those hours,

for all employees at the Port of Broome.

1.3. References

- KPA Alcohol and Other Drugs Procedure;
- KPA Fitness for Work Policy Statement; and
- Enterprise Agreements.

2. DEFINITIONS

Circadian rhythms – the internal body clock, the body's natural rhythms that are repeated approximately every 24 hours.

Fatigue – The loss of alertness and capacity to perform safely that results from insufficient sleep or poor quality sleep, working at times when you would normally be asleep or engaging in mentally or physically demanding activities.

Heat Stress – The net heat load on the body from the ambient environment, clothing and metabolic demands of an activity.

Heat Illness – A heat-induced illness that can cause serious injury.

Heat Stroke – A failure of the body's perspiration mechanism resulting in accelerating rise in body core temperature.

Time of day effect – this refers to the normal cycle of attentiveness and tiredness through the 24-hour day. During a typical day where a person has slept at night for 7-8 hours, they will experience periods of maximum fatigue in the early hours of the morning and a lesser period of fatigue in the early afternoon. During the fatigue periods of this cycle one may experience reduced attentiveness and during the high energy periods it can be difficult to sleep soundly.

3. RESPONSIBILITIES

3.1. Manager Responsibilities

Management responsibilities in relation to heat and fatigue management include:

- to provide information to new and prospective employees regarding the location of the workplace, type of work (for example irregular shift work), the weather conditions and working in a marine environment;
- to ensure that heat risks associated with work are considered during planning stages; and
- to recognise that personal problems on and off site can adversely affect safety performance.

For Manager's responsible for stevedores and maintenance workers your responsibilities also include:

- to establish shift changeover processes which fully inform incoming shift workers with current operating conditions;
- to ensure rosters are designed and scheduled with the following principles in mind:
    a. address the opportunity for quantity and quality of sleep particularly addressing the "time of day" effect;
    b. ensuring that the number of consecutive shifts (in particular night shifts), shift lengths and rest periods between shifts are considered in roster compilation;
    c. understanding that employees have a need to balance the competing requirements of their jobs with their social and domestic responsibilities;
    d. complying with breaks as specified in this plan and the EA;
    e. ensuring the number of consecutive "on call" shifts takes into consideration "occasional" or "frequency" of all call outs to determine restrictions on consecutive shifts; and
    f. addressing the potential for secondary employment to impact employee fatigue; and
- to authorise any exceptions to hours worked stated in this plan.

3.2. Supervisor and Operations Officer Responsibilities

Responsibilities for Supervisors and operations officers in relation to heat and fatigue management include:

- as per section 4.1 of this plan, to be alert for signs of fatigue and heat stress on the job and to instruct a worker to take an in-shift break immediately once these are observed;
- liaise with the relevant Manager or their delegate to modify the work schedule if there are concerns regarding extreme weather conditions;
- immediately report the observed signs of fatigue or heat stress to the relevant Manager or delegate for further investigation;
- be alert for any unusual behaviour, which might indicate stress, chronic fatigue or personal problems;
- ensure scheduled meal breaks and rest periods are taken; and
- report and respond to any incidents and accidents arising from hazards associated with fatigue or heat stress.

In addition to the above, additional responsibilities for operations officers are:

- be aware that the hours between midnight and 6.00am and the first night shift of a sequence may be particularly problematic for drowsiness; and

- ensure that work rosters comply with this plan and that authorisation is sought for any exceptions outlined in this plan.

3.3. Employee Responsibilities

All employees are required to attend work fit to safely perform their duties without risk to themselves or others. This can only be managed from a personal perspective by ensuring that an individual's time away from work includes sufficient sleep and recovery. This will include, amongst other things, employees managing any health, lifestyle, personal or family responsibilities that may impact on their fatigue.

Employee responsibilities in relation to fatigue and heat management include:

- present to work in a fit condition and not adversely affected by fatigue;
- utilise breaks provided within and between shifts to rest and recuperate;
- utilise PPE, sunscreen and equipment such as water bottles, fans and shade to minimise heat stress risks;
- report all incidents and accidents arising from hazards associated with shift work, fatigue or heat stress;
- recognise signs of sleep deprivation, fatigue and heat stress and understand the potential impact these risks may have on yourself and others;
- report to your supervisor the circumstances in which fatigue or heat stress are impacting on individual wellbeing and workplace safety;
- understand the implications of voluntarily seeking additional work hours, including secondary employment, that have the potential to increase risks to individual and organisational health and safety;
- ensure you comply with this plan; and
- for stevedore and maintenance workers, ensure your allocated shifts comply with this plan.

4. HEAT MANAGEMENT

Heat stress arises from a combination of work activities, environmental factors and factors outside of work (e.g. adequate rest, stress, medication, alcohol consumption). The management of heat stress is a shared responsibility between the employer and employees.

It is important that employees are aware of the different types of heat illnesses and related symptoms. Personal behaviour can affect heat stress as well with positive behaviours including:

- maintaining good hydration both during and outside of work;
- limiting consumption of alcohol and caffeine;
- eating healthy meals;

- obtaining adequate sleep levels; and
- good cardiovascular health.

4.1. Identifying Heat Illness

Employees shall immediately notify their supervisor if they experience any of the symptoms listed below in Table 1.

Table 1: Heat Illness and Causes

Heat Illness	Symptoms/Causes
Dehydration	Occurs when the body is depleted of salts and water. Symptoms include extreme thirst or possibly lack of thirst, lower back pain due to kidney malfunction, dry mouth, headache and yellowing of the urine. A dark yellow stream of urine may indicate severe dehydration. Dehydration may not only be caused by prolonged exposure to heat but also excessive exercise, diarrhoea/vomiting, fever and consumption of alcohol, coffee, and soft drinks.
Heat Stress	Occurs when the body is unable to cool itself sufficiently to maintain a healthy temperature. Normally, the body cools itself by sweating, but sometimes sweating isn't enough and the body temperature keeps rising.
Heat Rash	Sometimes called 'prickly heat', this is a skin irritation caused by excessive sweating. It looks like a red cluster of pimples or small blisters. It is most likely to occur on the neck and upper chest, in the groin, under the breasts and in the elbow creases.
Heat Fainting	Results from reduced blood flow to the brain. Heat causes an increase in blood flow to the skin and pooling of blood in the legs, which can lead to a sudden drop in blood pressure. There can be a feeling of light-headedness before fainting occurs.
Heat Cramps	Muscle pains or spasms that may occur after strenuous activity in a hot environment, when the body gets depleted of salt and water.
Heat Exhaustion	Can develop into heatstroke. Occurs when excessive sweating in a hot environment reduces the blood volume. Warning signs may include paleness and sweating, rapid heart rate, muscle cramps, headache, nausea and vomiting, dizziness or fainting.
Heat Stroke	This is a medical emergency. The body's internal systems start to shut down. Profound central nervous system changes can occur such as delirium, coma and seizures. The person may stagger, appear confused, have a fit or collapse and become unconscious.

4.2. Managing Heat Stress

Management of heat stress requires the following measures to be undertaken:

- assessing environmental and work conditions;
- development of activity specific controls;
- provision of adequate cooling, hydration, and engineering controls; and
- employee awareness about the causes, controls and symptoms of heat illness.

Assessing environmental and work conditions

When assessing the risk of heat stress in relation to a specific activity it is important to take into consideration:

- the weather conditions on the day;
- the location of the work; and
- the type of work being carried out.

All of these will impact the risk of heat stress and determine the types of controls that will be put in place.

Identification of activity specific controls

Depending on the nature and location of work, the following controls may be utilised to reduce the risk of heat stress:

- utilising or installing shade during work activities and during breaks;
- rotating tasks and employees to vary physical activity and reduce potential heat stress;
- where possible scheduling heavy, physical work for the early or cooler times of the day;
- rostering modifications as outlined in this plan, such as extending break periods; and
- using fans in the work area. When working on the vessel, ask the vessel crew if they can provide a fan in the rest area. Alternatively, there are fans available in the maintenance work shop – ask for the masters approval to bring the fan on board and liaise with the vessel crew to find a safe spot for the fan ensuring there are no trip hazards.

Provision of adequate cooling, hydration, and engineering controls

In addition to the controls above, there are a range of other controls in place to reduce the impact of heat stress including:

- Hydration –

- KPA provides water esky's to KPA employees, always have your water esky with you when you are working. On hot days, try to drink a cup of water (about 250ml) every 15 to 20 mins;
- ice machines – there are ice machines on the wharf and in the maintenance yard;

- PPE – use hard hat brims and sunscreen; and
- breaks – consider utilising air conditioned spaces when on breaks.

4.3. Heat Stress First Aid Procedure

If an employee has symptoms of heat illness:

- lie casualty down in a cool area;
- loosen tight clothing and remove excessive clothing;
- sponge with cold water;
- give cool water to drink; and
- if the individual vomits or does not recover promptly, seek medical aid.

If an employee has heat stroke:

- follow DRSABCD (Danger, Response, Send for help, Airway, Breathing, CPR and Defibrillator);
- apply ice to neck, groin and armpits;
- call for an ambulance; and.
- if casualty is fully conscious and able to swallow, give fluids

5. FATIGUE MANAGEMENT

Fatigue management is a shared responsibility between the employer and employee as it involves factors that occur both in and outside of the workplace. If you are experiencing fatigue it is important to identify the factors that are contributing to fatigue, discuss any issues with your employer, make changes as required, including sleeping patterns, workloads, rosters and lifestyle behaviours and seek professional help if necessary.

5.1. How does fatigue affect safety?

The safety consequences of fatigue include:

- decreased alertness;
- slowed reaction time;
- poor hand-eye coordination;
- poor communication;

- higher error rates;
- reduced vigilance;
- reduced decision-making ability;
- poor judgement of performance, especially when assessing risks;
- being easily distracted during complex tasks;
- difficulty responding to emergencies;
- loss of awareness of critical situations; and
- inability to remember the sequence of events.

5.2. Identifying Fatigue Hazards

Fatigue is caused by prolonged periods of physical and/or mental exertion without enough time to rest and recover. Causes of fatigue can result from both features of the work and workplace and from features of a worker's personal life. Employees shall immediately notify their supervisor if they experience any of the symptoms listed in Table 2 below.

The supervisor shall arrange for the employee to have a short break. If the employee feels that they are too tired to continue, the supervisor **shall** make arrangements for the employee to be stood down for the remainder of the shift or working day.

Table 2: Symptoms of Fatigue and Tiredness

Symptoms of Fatigue	Symptoms of Tiredness
• Headaches	• Drowsiness
• Muscle aches	• Short temper
• Breathing and digestive problems	• Blurred vision
• Distraction	• Difficulty keeping eyes open
• Nervousness	• Head nodding
• Impaired decision making	• Resting the head on a surface
• Slow motor skills/reflexes	• Excessive yawning
• Short term memory problems	• Changes in voice alertness on the two-way radio
• Reduced capacity to engage in effective communication	• Poor judgement when operating equipment
	• Arriving at a destination and not remembering how you got there

5.3. Self-Identify

All employees are responsible to present fit for work. Employees who believe they are unfit for work due to fatigue, either caused by their existing work roster or from difficulty managing their activities or lifestyle, should self-identify. Employees who do self-identify are to advise their supervisor immediately.

If the need to self-identify occurs frequently (e.g. two or more times in a month), the employee must discuss their difficulties with their Manager to identify any potential roster or workload/scheduling problems, the possible need to seek professional advice on contributory medical problems or on the management of their social life, family responsibilities and relationships.

Individuals may need to consider the following when managing their fatigue:

- managing the hours of work for multiple jobs or secondary employment; and
- managing external factors that may impact on their ability to carry out their work duties.

5.4. Office Work and Office workers

KPA office workers in general work regular office hours, however, any out of hours work is to be taken into consideration as part of fatigue management. Any fatigue concerns or risks must be raised with the relevant manager.

5.5. Job Design, Work Scheduling and Planning

The key to managing fatigue successfully is ensuring that workers have sufficient time between shifts/work.

To minimise the potential for fatigue hazards in the workplace, consider the following when undertaking and planning tasks:

- use plant machinery and equipment that eliminates or reduces the mental and physical demands of the job;
- do not exceed 3 hours of continual use of plant machinery that involves high levels of mental and physical demands without a break, e.g. crane operations;
- redesign the job to include a variety of mental and physical tasks;
- introduce job rotation to reduce mental and physical fatigue, e.g. alternate between working in the hold and on the wharf;
- optimise and increase rest periods during extreme heat and humidity periods in liaison with the relevant Manager;
- increase the amount of variation in work tasks to reduce repetition, e.g. swap roles with a member of your team;
- for employees using computers, vary office screen-based work between sitting and standing;

- consider other potentially limiting factors such as age, current or pre-existing injuries, general health condition;
- where possible, reduce the time spent doing mentally and physically demanding work; and
- ensure there are adequate numbers of people and resources to do the job without placing excessive demands on personnel.

In addition to the above, when rostering work for KPA stevedores the following must be taken into consideration:

- where possible, establish shift rosters ahead of time and avoid sudden changes of shifts to allow employees to plan leisure time;
- appropriate supervision during periods of low alertness;
- set standards and allow time for communication at shift changeover;
- for any ships crane operations there should be at least 2 operators rostered on to allow for tasks to be alternated;
- casing vessel shifts to be restricted to 10hrs, unless approved by the Operations Manager (or their delegate)
- during the wet season the weather, type of vessel and cargo will be taken into consideration when rostering and working hours may be restricted;
- consider the time of day effect when rostering and remember that disrupting the body's circadian rhythms can cause fatigue and affect performance. Schedule safety critical work outside low body clock periods i.e. between 0200h-0600h; and
- avoid morning shifts starting before 6am where possible.

5.6. Night work and rest break guidelines

For night shifts the following guidelines apply:

- take into consideration the type of vessel, cargo and external factors such as weather;; and
- ensure fatigue risks are considered when rostering sequential night shifts.

For breaks between shifts the following guidelines apply:

- 10 hour break between hours worked unless approved by the Operations Manager or Engineer (or their delegate);
- Shifts not to exceed 12 hours. Any work beyond 12 hours requires approval by the Operations Manager or Engineer; and

5.7. Stevedore Days Off

A minimum of 2 days off (i.e. not working) is required within each 14 day period. Note: days off do not need to be taken consecutively.

Exceptions – No exceptions to any of the limits above will be made without the approval of the Operations Manager or Engineer (or their delegate).

ACKNOWLEDGEMENT

This written assessment MUST be completed by KPA employees to ensure a good understanding of the Fatigue Management Procedure.

INSTRUCTIONS: All questions **MUST** be answered correctly; incorrect answers will require you to demonstrate your understanding to the HSE Officer or delegate. Read each question carefully and tick the answer that is CORRECT and fill in where indicated. Pass mark is 100% correct.

Questions:

1. Fatigue can be either

- ❑ A) Work related
- ❑ B) A combination of work and non-work related
- ❑ C) Non-work related
- ❑ D) All of the above

2. Employees have an obligation or responsibility to manage their own fatigue.

- ❑ True
- ❑ False

3. Employees who self-identify as fatigued or heat stressed at work are to advise:

- ❑ A) No one
- ❑ B) Their supervisor immediately
- ❑ C) Anyone in close proximity
- ❑ D) Permanent employee

4. With reference to fatigue management, employees have an obligation to present to work:

- ❑ A) On time and ready for their respective shift
- ❑ B) Wearing appropriate personal protective clothing
- ❑ C) In a fit condition and not adversely affected by fatigue
- ❑ D) If they feel unwell and fatigued

5. Employee fatigue can contribute to potentially dangerous and costly errors.

❑ True ❑ False

6. Identify two things you should consider when assessing the risk of heat stress in relation to a specific activity:

1) _____

2) _____

7. Some ways that you can minimise the impact of heat stress include:

❑ A) maintaining good hydration both during and outside of work

❑ B) limiting consumption of alcohol and caffeine

❑ C) good cardiovascular health;

❑ D) obtaining adequate sleep levels

❑ E) all of the above

8. List three things you should do when treating someone for heat illness:

1) _____

2) _____

3) _____

I have read and understood the content of the Policy/Procedure and agree to be bound by the Policy/Procedure.

Full Name (please print): _____

Signature: _____ ***Date:*** _____