

APAC

Fatigue Management Procedure

S3[APAC]-009-PR1

1. Purpose and Scope

- a. The purpose of this procedure is to provide direction for management and employees in the planning of activities to ensure that fatigue related risks, caused by factors such as the lack of sleep, high levels of exertion, weather conditions, and/or physical conditions are managed effectively. Fatigue must be considered for all office and field activities, including commuting to and from home.
- b. This procedure shall apply to all AECOM controlled operations in Asia Pacific (APAC) and all work activities carried out by AECOM APAC employees, contractors and subcontractors.

2. Procedure

2.1 Minimum Requirements

- a. Where there is a risk of fatigue, managers in conjunction with staff should conduct a risk assessment that takes into account the fatigue risk factors (e.g. driving, travel interstate, etc.) relevant to their operation. This should be documented either in the project specific risk assessment (e.g. Safety, Health and Environment Management Plan (SHEMP) / Safe Work Method Statement (SWMS)), or for offices, in the Office Risk Register.
- b. Suitable controls need to be communicated to staff, including supervised contractors or AECOM engaged Subs, prior to the commencement of a project and/or task to ensure individuals maintain alertness and guard against fatigue.
- c. The following minimum fatigue controls shall be implemented:
 - i. Working hours must not be longer than 12 hours per day (including driving back to base) without a proper risk assessment and approvals in place.
 - ii. Spilt shifts shall not exceed 14hours, determined by the start time of the first period of work and the finish time of the last period of work (e.g. 6am – 12noon, 3pm – 8pm)
 - iii. Time between each rostered shift should not be shorter than 10 hours (total rest not including the journey to and from work)
 - iv. Personnel must not work continuous shifts for more than 14 days.
 - v. Note some regions have also implemented restrictions on the maximum number of overtime hours that can be worked each month and local HR guidelines need to be considered as well.
- d. As a guideline for every five days of work the employee will be entitled to 48 hours rest (not inclusive of normal sleeping time). Where the project requires working on shifts over a number of weeks, or it is a requirement that staff work Saturdays the 48 hours should be accrued over the period and taken by the employee at the end of the shift period.
- e. Where it is not possible to comply with the minimum controls outlined above the office/project must, in consultation with the Group Director/Team Leader and local SH&E Manager, ensure it has adequately assessed the risk of fatigue, encouraged staff to report where they may not be fit for work due to fatigue and developed adequate controls to support staff who are unfit e.g. rest areas, time in lieu, taxi vouchers etc.

2.1.1 Non-Compliance

- a. Any breaches of the minimum requirements of this Procedure shall be reported as an incident in IndustrySafe in accordance with the requirements of the Incident Management Procedure.

2.2 Fatigue Self-Assessment

- a. The Fatigue Self-Assessment Worksheet should be completed by employees prior to the start of each shift for the following scenarios:
 - i. Where the residual risk of fatigue in the SWMS is classified as medium or higher
 - ii. Where any of the minimum requirements outlined in section 2.1 of this procedure have not been met
 - iii. For ongoing assessment of fatigue as required.
- b. On completion, the worksheet is to be discussed with the Supervisor and appropriate controls implemented based on the level of risk prior to commencing or continuing works.

2.3 Rostering Strategies

The following rostering preferences can act as guidelines for managers who are implementing change to a work schedule:

- a. Rapid rotation of shifts is preferable to slower rotation. A shift sequence that has a change every few days is preferable to a sequence that has an extended rotation. A rapid system may produce fewer disruptions to the internal body clock;
- b. Clockwise rotation is preferable to counter clockwise rotation. A series of days, afternoons and nights mimics the body clock more effectively than a rotation of nights, afternoons and then day shifts; and
- c. Nightshifts are particularly disruptive to the employee's body clock and their life. As such, night work should be limited or minimised wherever possible.

2.4 Other Fatigue Management Strategies

- a. Other fatigue management strategies should include, but not limited to, the following:
 - i. Additional supervision during periods of greater risk;
 - ii. Providing additional rest-breaks – especially with repetitive, physically demanding or high concentration and / or mentally demanding work;
 - iii. Providing areas where employees can cat-nap (for approximately 20 min);
 - iv. Providing access to low-GI energy foods;
 - v. Working from home after period(s) of extended work activities;
 - vi. Providing taxi vouchers, or sourcing accommodation for staff, that are un-fit to drive or use public transport;
 - vii. Identification of fatigue critical tasks and implementation of suitable controls where there are potentially increased risks of incidents, injury or harm if employees become fatigued;
 - viii. Provision of information and training on fatigue management and health and lifestyle factors including:
 - Sleep amount and quality; sleep disorders (e.g. apnoea);
 - Effects of diet;
 - Effects of recent illness or injury;
 - Influence of alcohol or drugs (including prescription drugs);
 - Commuting distance; and
 - Other activities or responsibilities that may impact on levels of fatigue (e.g. new baby; competitive sport).
 - ix. Identification and control of environmental factors (e.g. heat, humidity, noise levels, vibration).

3. Terms and Definitions

Define only those terms mentioned within the document and list using 'Alpha List' option from the AECOM Procedure List dropdown on the Home tab.

- a. **Fatigue** Is a state of physical and/or mental impairment that is associated with reduced alertness, reduced performance, and impaired decision making. As a result, fatigue can impact significantly on a workers ability to perform the job safely which may negatively impact on themselves or others in the workplace. For more information (see Appendix 1).
- b. **Sleep Debt** Sleep debt is the phrase used to describe where there is a deficiency between the sleep a person needs and the sleep they actually get. Sleep debt is accumulative and will need to be "repaid" at some stage. The greater the sleep debt, the greater the risk of having a fatigue related incident.
- c. **Shift Work** Work comprising of recurring periods in which groups of workers do the same jobs in rotation. Shift workers tend to have poorer sleep quality than day workers. Factors such as temperature, noise and light can influence the quality of sleep obtained during the day. Night work creates high fatigue levels, simply because of the body's natural rhythms. Fatigue levels are usually highest at around 03H00-05H00.

4. References

- a. Fit for Work Guidelines S3AN-704-GL1
- b. Incident Management Procedure S3[APAC]-004-PR1

5. Records

- a. Fatigue Self-Assessment Worksheet S3[APAC]-009-FM1
- b. Office Risk Register
- c. Safety, Health and Environment Management Plan (SHEMP)
- d. Safe Work Method Statement (SWMS) Template S3[APAC]-209-FM2

6. Appendices

- a. Appendix 1 – Defining Fatigue

7. Change Log

List the change history pertaining to this document including if it was identified differently throughout its life-cycle:

Rev #	Change Date	Description of Change	Location of Change
0	May 8, 2018	Initial Release	All

Appendix 1 Defining Fatigue

- a. The below are signs and symptoms of fatigue and if displaying any of these complete the Fatigue Self-Assessment Worksheet and ensure controls are documented in the relevant project/office specific risk assessment:
 - i. Slow reaction times;
 - ii. Reduced attention / motivation;
 - iii. Poorer communication;
 - iv. Decreased efficiency;
 - v. Increased variability of performance;
 - vi. Decreased short-term memory;
 - vii. Involuntary napping;
 - viii. Micro-sleeps;
 - ix. Reduced vigilance;
 - x. Delayed reaction times;
 - xi. Irritability;
 - xii. Poor hand-eye coordination;
 - xiii. General health and fitness issues including lower immunity; and/or
 - xiv. Increased risk taking behaviour.
- b. Fatigue is naturally higher at certain times:
 - i. Midnight – 06H00;
 - ii. First night shift;
 - iii. Early hours of the day shift;
 - iv. End of the shift;
 - v. End of a roster period;
 - vi. Change of roster;
 - vii. Commuting to and from work; and
 - viii. If the employee is new to shift work conditions.