

Manual Section 7	Issue Date 03/17/16	Revision Date 06/15/21	Policy Number LLCP-069
Fatigue Management			

PURPOSE

The purpose of this document is to assist in the assessment of risk and causes of fatigue and mitigate the related hazards for Company Personnel.

The Company will provide initial and annual training on how to recognize fatigue, how to control fatigue through appropriate work and personal habits, and reporting of fatigue to supervision.

SCOPE

All LLC Companies including, Blanchard Industrial, LLC, GIS Engineering, LLC, Grand Isle Shipyard, Inc., and GWIS, Mack Steel, NuWave, Sun Industries; hereafter identified as “Company”.

PROCEDURE

Introduction

Fatigue is a complex issue that not only arises from hours of work and activities at the work place but it is also influenced by factors outside of work (e.g. family responsibilities, stress, lifestyle, personal health, amount and quality of sleep, etc.). The management of fatigue is a shared responsibility between management and each individual.

Signs of fatigue include long eye blinks, repeated yawning, frequent blinking, bloodshot eyes, poor reaction time, slow speech, loss of energy, and an inability to concentrate. Fatigue can result in a lack of attention, difficulty following instructions, reduced ability to think clearly, and slower response to changing circumstances. Chronic fatigue can also lead to long term health issues.

Many adults need 7 to 8 hours of sleep in every 24 hours to feel well rested. A sleep debt is built up by routinely getting less than 7 to 8 hours of sleep per night. This debt may result in impaired performance, reduced alertness and higher levels of sleepiness and fatigue. A sleep debt can only be repaid with restful sleep.

Fatigue contributes to accidents by impairing performance and in extreme cases causing people to fall asleep. Fatigue related “micro sleeps” are very hard to predict or prevent and can place the individual and others safety at risk.

Managing fatigue requires the following measures to be undertaken:

- Complete a fatigue risk assessment.
- Create a management plan to eliminate or mitigate, with controls, identified risks.
- Ensure personnel are educated and informed of fatigue risk.

Ergonomic equipment will be used to improve workstation conditions such as anti-fatigue mats for standing, lift assist devices for repetitive lifting, proper lighting and control of temperature, and other ergonomic devices as deemed appropriate.

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Risk Assessment

A fatigue risk assessment must identify the impact of fatigue risks, taking into account relevant local regulations, as applicable. Fatigue risks must be assessed as *Tolerable*, *Intermediate*, or *Intolerable*.

- *Tolerable* – Controls in place are adequate to mitigate the risks and do not need active management.
- *Intermediate* – Controls require active management while tasks are being performed.
- *Intolerable* – Must be addressed with additional controls and reassessed.

Assessment of Control Effectiveness

Control effectiveness can be reviewed by examining reports of fatigue and incidents where fatigue is a factor. Effectiveness of controls can also be monitored by examining personnel and circumstances where extended shifts need to be worked. Compliance with fatigue management requirements must be assessed to ensure controls are in place and operating effectively. Deficient controls must be remedied in a timely manner.

Any risks deemed *Intolerable* must be addressed with additional controls which allow a reassessment of *Tolerable* or *Intermediate*. Completed assessments must not contain risks assessed as *Intolerable*.

The risk assessment and management plan must be documented and reviewed when work schedules or job roles are significantly modified. A fatigue management plan is any document that is used to address the identified risks in the risk assessment.

Operational Work Schedules/Rosters

The risk of fatigue can be significantly reduced by effective planning and resourcing of work shifts, work cycles and rotations. Each Asset Manager must ensure that schedules, work cycles or job roles are assessed for fatigue risks. The following items must be assessed at a minimum:

- Are safety critical tasks planned during “circadian low” hours, 2am - 6am and 2pm-4pm? (*Diagram illustrated on pg. 7*)
- Are complex tasks planned on the first or final shift of a nightshift work cycle?
- Are standby and on-call duties limited where possible?
- Does day shift start before 6am?
- Is the maximum number of shifts in a work cycle in line with relevant industry practices and regulatory standards?
- Do extended shifts (> 12 hours) occur more than three times in a work cycle?
- Do shifts rotate backwards (day to night to afternoon)?

Office Work, Business Travel and Commute Time

Office work, business travel, and commute time have associated fatigue risks that must be managed. Business travel to operational sites must be managed through local journey management plans. General business travel must be managed through fatigue risk assessments. Commute time and core business hours for office locations must also be assessed.

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The following items must be assessed at a minimum:

- Do office schedules regularly exceed 14 hours per day, including the lunch break and total commute time?
- Do core office hours regularly exceed 80 hours in a two week period?
- Are opportunities for car/van pooling or use of public transport available?
- Does business air travel occur where total travel time from home to destination is > 14 hours?
- For business related ground travel, are alternatives to self-drive available?

As part of the Fit for Duty program, employees must follow guidelines for Safe Work Practices set forth by the Company in order to remain in compliance and to prevent harm to the employee. Employees will be monitored for activities or behaviors that may require the employee to be removed from the worksite to prevent injury to his/herself or fellow employee.

Employees are responsible for ensuring they are physically and mentally fit to perform their job functions safely. They are to notify their Supervisor immediately if they feel that they will not be able to perform their job task safely due to fatigue. Employees must take responsibility for their own safety as well as not reporting to work in a condition as to endanger the safety of their fellow workers.

Employees are not to work more than an eighteen hour day (maximum; and should be avoided when possible) including travel without sufficient rest. Employees traveling long distance to make crew change or to a work location are advised to utilize the Company Logistic Center/Bunk House to rest the day prior to mobilizing to an offshore facility.

Revised Work Schedules During a Pandemic

With the current situation regarding COVID-19 upon us, it's important to keep your health in mind when deciding to work schedules, differently than you would normally work. We encourage all employees to personally assess their situation and should you feel anxious or have anxiety at any time in relation to work schedules, to please let your supervisor know.

We understand that during a pandemic, Client locations may adjust schedules to allow additional time on location by the same crew which assures that infected individuals are not accessing the facility and exposing others. Examples of this are extending offshore rotations from 14&7 to 21&7. We understand the need for this and agree with this process. We will allow employees to continue to work past the 21 day rotation, not to exceed 60 straight without having them to physically come in to spend time with their family. In addition, if any employee during that extension period feels that they need time off on location, they will be allowed to do so without penalty.

Risk Controls

Risk controls for mitigating fatigue must be applied using the hierarchy of controls (Found in chart later in this process). Job rotation, frequent breaks and adjusting the work environment are a few examples of controls. The number of employees at risk and the level of risk must also be considered when implementing controls.

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Rest

Rest is the most important control measure for managing fatigue. Time spent away from the immediate work environment allows workers to recover from fatigue, thereby improving work performance, vigilance, safety and efficiency. Conditions for restful sleep must be provided and breaks must be taken during the work shift and not be traded for an early finish time for the shift.

To provide adequate rest consider the following:

- Is a ten hour or longer break between work shifts provided?
- Does the break between work shifts provide a sleep opportunity of 7 or more hours of continuous sleep?
- Is a minimum of one break provided between each 4 hours of work with one break of sufficient length to have a meal (i.e. 30 minutes)?
- Are more frequent short breaks allowed during strenuous activities?
- Is ready access to drinking water provided?
- Do Call-Out/On Call schedules provide for adequate rest before returning to a regular work shift?

Training – Awareness

New Hire Training

Awareness level training must be provided to all personnel who have been identified to be at risk for fatigue. The purpose of this training is to provide information and education related to the risk factors and signs of fatigue. The training will assist all personnel to recognize the symptoms of fatigue and manage fatigue risks in a safe manner. As a minimum, the training topics must enable the individual to:

- Understand responsibilities and know how to recognize the effects of fatigue in themselves and others.
- Understand the influences of a healthy lifestyle and non-work activities on fatigue.
- Understand the effects of medical conditions, sleep disorders, and drugs and alcohol.
- Understand how to apply personal countermeasures to managing fatigue.
- Understand and accept their responsibility to use their recovery time effectively and present rested and fit for work when their work shift begins.

Ongoing

Awareness level training should be presented to all employees who have been identified to be at risk for fatigue periodically to ensure a minimum level of understanding.

Training – Supervisory Roles

New Hire/Promotion

Initial and periodic supervisory-level training must be provided for personnel with a supervisory role. The purpose of the training is to provide the skills and information to implement fatigue management principles in the daily operation of their assigned duties.

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This training will also assist supervisors to recognize and manage fatigue risks with their direct reports. Training topics must include those contained in the awareness level training and the following:

- Understand responsibilities and when to initiate fatigue controls.
- How to manage employees who present signs of fatigue.

RESPONSIBILITIES

All Personnel

- Arrive fit for work at the commencement of and during the work period.
- If not fit for work then notify their supervisor to ensure that an appropriate risk mitigation process is implemented.
- Comply with this fatigue management process.
- Monitor for the signs and symptoms of fatigue in their co-workers and team members.
- Communicate and report personnel fatigue issues to their Supervisor immediately.
- Attend awareness level training.
- Employees must not chronically use over-the-counter or prescription drugs to increase mental alertness.

Asset Managers or Supervisors

- Ensure that persons under their control are aware of and comply with this procedure.
- Ensure that applicable work schedules comply with this procedure.
- Monitor personnel for the signs and symptoms of fatigue.
- Approve controls for managing fatigue.
- Conduct a review with the Corporate HSE department of any fatigue-related incidents and the effectiveness of existing control measures as required.
- Attend supervisor training.

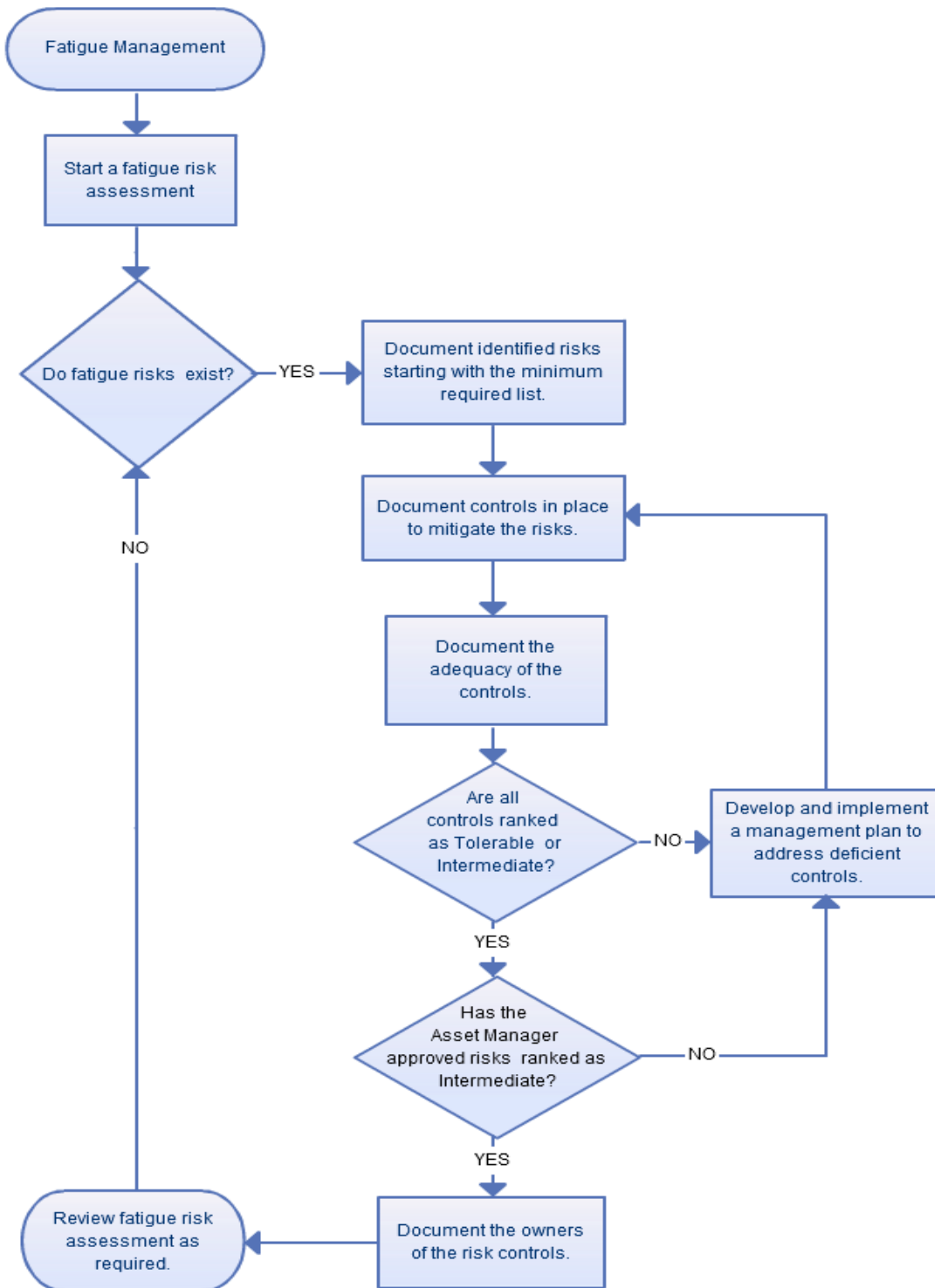
HSE Personnel

- Provide timely advice, support and assistance to Asset Manager or Supervisors in the implementation of this process.
- Conduct a review of fatigue risk assessments and the effectiveness of existing control measures as required.
- Ensure that fatigue related incidents are reported and fatigue is considered during incident investigation.
- Attend supervisor training

VARIANCES

Any planned deviations from the requirements of this procedure shall require a MOC signed by Leadership.

Fatigue Management Flowchart



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Example Fatigue Assessment

Fatigue Risk	Impact	Controls	Adequacy	Approval
Safety critical tasks occur during circadian low hours	Increased potential for a fatigue related incident.	Provide an adequate sleep opportunity. Provide adequate breaks.	Intermediate	Asset Manger
Sleep interruption due to on-call duties.	Interrupted or inadequate sleep?	Provide additional rest time before returning to regular shift.	Tolerable	Supervisor
Extended shifts occur more than 3 times in a work cycle.	Increased potential to accumulate a sleep dept.	Provide an adequate sleep opportunity. Provide adequate brakes	Intermediate	Asset Manager
Business air travel occurs where total travel time is more than 14 hours	Traveler will be too fatigued to drive.	Taxi service is provided at the destination.	Tolerable	Supervisor

Note...Understanding the human body's Circadian Rhythm, will aid in a good assessment of fatigue and work scheduling.

