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<th><strong>Project</strong></th>
<th>PT/Wells-Deepwater (GoM)</th>
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<tr>
<td><strong>Document Title</strong></td>
<td>Fatigue Risk Management Plan</td>
</tr>
<tr>
<td><strong>Document Number</strong></td>
<td>EPT-PD-HAZ-0002</td>
</tr>
<tr>
<td><strong>DCAF Control ID Number</strong></td>
<td>N/A</td>
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<tr>
<td><strong>Document Revision</strong></td>
<td>01A</td>
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<tr>
<td><strong>Document Status</strong></td>
<td>Approved</td>
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<tr>
<td><strong>Document Type</strong></td>
<td>HX-0502/ Fatigue Analysis Report</td>
</tr>
<tr>
<td><strong>Owner / Author</strong></td>
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<tr>
<td><strong>Issue Date</strong></td>
<td>2016-12-16</td>
</tr>
<tr>
<td><strong>Expiry Date</strong></td>
<td>None</td>
</tr>
<tr>
<td><strong>ECCN</strong></td>
<td>EAR 99</td>
</tr>
<tr>
<td><strong>Security Classification</strong></td>
<td>Restricted</td>
</tr>
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<td><strong>Disclosure</strong></td>
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<th>Description</th>
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<td>01R</td>
<td>2015-11-06</td>
<td>Draft for Review</td>
<td>A. Halla</td>
<td>J. Murphy</td>
<td>J. Hendrikse T. Strawmyer</td>
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<tr>
<td>01A</td>
<td>2015-11-09</td>
<td>Draft for Approval</td>
<td>A. Halla</td>
<td>J. Murphy</td>
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### Summary

Addressing the Management of fatigue related risks and hazards in the PT Wells-Deepwater (GoM) work environment.

### Keywords

Fatigue, FRMP, Deepwater, PT-Wells
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1. INTRODUCTION

1.1. Fatigue Policy

Shell is committed to providing a safe work system and a safe and productive workplace by eliminating conditions and work practices that could lead to personal injury, equipment and other property damage.

Fatigue can impair fitness to work and may have negative impacts in the areas of Health, Safety, Security and the Environment (HSSE). To combat the adverse effect of fatigue, Shell’s objective is that all personnel HSSE Critical Positions recognize this threat and manage and minimize the associated risks. For the purpose of Deepwater Wells this will primarily be individuals functioning a in Frontline Barrier Manager (FLBM) role.

In support of Shell’s commitment PT/W/D will:

- Create a safe working environment by managing the risks associated with fatigue using a validated risk model in combination with other outcome measures, such as incident and injury reports, regularly review the results, and then take actions to reduce the risks.
- Strive to ensure off-duty time is sufficient to achieve eight hours of continuous sleep.
- Identify and manage work-related fatigue issues.
- Manage fairly and constructively people who are deemed unfit for work as a result of fatigue.
- Manage training and education related to fatigue management.

1.2. Purpose

The objectives of this Fatigue Risk Management Plan (FRMP) are to ensure:

- Those in FLBM Positions and their line managers, are aware of the HSSE Critical Activities that may be at risk from fatigue.
- That PT/Wells-Deepwater has in place controls for managing the risk of fatigue on HSSE Critical activities to as low as reasonably practicable (ALARP).
- That the effectiveness of those controls is regularly reviewed and subjected to continual improvement.
- That incident investigations conducted at PT/Wells-Deepwater locations identify situations where fatigue may have been a contributing factor to significant (i.e.
1.3. Scope and Applicability

The FRMP covers the activities and projects undertaken by PT/Wells Deepwater that involve people in FLBM Positions working in an offshore environment.

The FRMP is concerned with managing the risk of fatigue affecting the safety of Shell FLBMs. The FRMP applies to Shell employees and Mode 1 Contract Staff who are in a FLBM position or HSSE Critical Positions. Mode 2 Contractors are expected to implement their own FRMP for personnel in HSSE Critical Positions in alignment with the Shell Plan.

2. ROLES AND RESPONSIBILITIES

The following outlines roles and responsibilities respective to the implementation of the FRMP.

- **DW SE Manager**
  - Responsible for:
    - Annual review
      - Appropriateness of DW FRMP
      - Fatigue assurance
      - Training completion/compliance

- **Line Managers of those defined as operating in a FLBM capacity**
  - Defined as the Line Leadership of FLBM positions, responsible for:
    - Maintaining compliance with FRMP in workforce scheduling
    - Engaging in open dialogue with regard to Fatigue in the workplace
    - Taking action to reduce risk of fatigue-induced error in individuals who are not sufficiently fatigued to need to stop work.
    - Identifying situations whereby individuals under their supervision are or could become unfit to work due to fatigue
    - Create a working environment where employees feel able to report to their supervisor if they are experiencing excessive fatigue at work
    - Assure that all self-reporting is taken seriously
- Ensure that incentives are not created that encourage a lack of reporting
- Ensuring individuals under their supervision complete required fatigue training

- Individual Employees function in a FLBM capacity
  - Responsible for:
    - Complying with the PT Wells Deepwater (GoM) Fatigue Risk Management Plan (FRMP).
    - Engaging positively with company efforts to mitigate risk of fatigue in the workplace.
    - Securing adequate sleep during non-working hours
    - Remaining continuously aware of one’s own level of fatigue when on duty
    - Notifying immediate supervision when their own fitness for duty could be in question due to fatigue.
    - Maintaining awareness and intervening if colleagues demonstrate signs of fatigue suggesting that their fitness to work safely may be in question
    - Notifying their Line Manager of any situation where there has been a breach of policy.

- Mode 2 Contract Companies and their employees
  - Defined as any contracted worker from a Mode 2 Contractor, assigned in HSSE Critical Positions at PT-Wells Deepwater sites. Responsibilities for:
    - Understanding and adhering to the contractor specific document as outlined in the Contractor Fatigue Risk Management document (Appendix 1)
    - Train personnel on their own FRMP
    - Ability to demonstrate compliance to their FRMP

- Key Support Functions
  - Supporting vessels and emergency response workers will be managed by the UAD and UAD Logistics FRMPs

3. POSITIONS MANAGED BY THE FRMP
- FLBM
- Wells Offshore Team Leads (Superintendent)
- Wells Staff Employees in Emergency Response roles
4. **SAFETY PROMOTION: TRAINING, EDUCATION AND COMMUNICATION**

Workers identified as a FLBM and their line managers, must complete the following training via Shell Open University (SOU):

- Module 1: Introduction to Fatigue (00142061)
- Module 2: Fatigue Self-Management (00142062)

Training will be refreshed every 3 years.

In addition, line managers must ensure applicable FLBMs are made aware of FRM training requirements as well as proactively inform all workers with the risks associated with lack of time off for sleep through proactive sharing of FRM information at tailgate meetings, safety meetings, core contractor meetings, and other appropriate times.

On-going awareness and communication should consider options including face-to-face workshops, safety-moments, newsletters, posters and other awareness-raising materials, including such materials available on the [Shell Health Fatigue website](#).

5. **OPERATION-SPECIFIC FATIGUE MANAGEMENT CONTROLS**

5.1. **Hours of Service Limits**

Planned work schedules are 12-hours shifts and should ensure that no one is scheduled to work for more than 14 continuous hours, including breaks and meal times. Certain positions such as the Wells Supervisor/FLBM maintain these hours but may also be subject to “on call” for emergencies or critical operations during their ‘off-hours’ that require their presence.

Instances where this work is anticipated to exceed the planned work schedule of 14-hour shifts, shall be managed proactively by the affected party and/or his/her line manager i.e. delayed start to the work day, a nap during routine work hours, etcetera to assure the individual has adequate opportunity for sleep depending on the circumstances.
The 14 hour extended shifts are considered to be the maximum limit, and are subject to the exception process when unforeseen circumstances require an individual to work beyond this limit. In the case of unforeseen circumstances, an exception shall be captured as per section 5.3.

*Minimum time off after shift is based on Shell’s policy to strive to ensure off-duty time is sufficient to achieve eight hours of continuous sleep.

5.2. Work Duration Limits

- The existing schedule (e.g., hitch length) of field based individuals (e.g. 7/7, 14/14, 28/28) shall be followed. Extensions recorded as part of the exception process shall be minimized and must meet the following requirements:
  - The individual’s supervisor must ensure that controls are in place to recognize and manage fatigue.
  - The individual may not work more than 28 consecutive days without at least 24 hours of continuous time-off.

5.3. Exception Process

If any of the mandatory requirements specified in the hours of service and work duration limits are expected to be exceeded, the management exception process shall be followed. A sample Exception form is provided in Appendix 2. The following authorization and notification process, or practical equivalent is required for approval of an exception. At a minimum the following is to be captured:

- Individual requesting exception
- Reason for exception
- Length of exception

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<td>Exception Required</td>
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<td>&gt;14 hours</td>
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| Maximum Number of Consecutive Extended Shifts | 2 |
5.4. **Work Planning**

Prior to the start of a job or project, consideration shall be given to the appropriate level of workers required to comply with the requirements of the FRMP. Special considerations for work or projects will take place during the CWOP/DWOP/IWOP process.

Fatigue Mitigation should address planning and scheduling of critical activities or changes during periods of time considered to be of high alertness. Although most of these activities must be performed in sequence, some consideration can be given to the alertness status of the personnel attempting the activity. These should be addressed in planning meetings, tool box talks, and documented on the JSA for the appropriate task.

5.4.1. **Crew Change and Short Change**

To comply with the Control Framework requirement to manage situations that states, *[people in HSSE Critical Positions where] day-to-day changes to shift start times that are a change of more than three hours…* considerations need to be given to Crew Change days and Short Change shifts where individuals are transitioning to or from working night shift, and or starting/ending their hitch. Given the nature of Wells operations these situations cannot be avoided and situations may vary. It is the responsibility of the responsible supervisors to assure these situations are managed appropriately and identified positions are allotted enough rest. Some best practices include:

- Delayed start times when crew change helicopters are late
- Short changing of supervisory positions the day before the rest of the crew
- Utilizing the buddy system/check in process for critical positions e.g. trip tank hand
- Eliminating Short change and shifting from days to nights each hitch

5.5. **Fatigue Reporting**

5.5.1. **Fatigue Reporting Policy for Employees**

Employees shall be aware of their level of fatigue at all times and take appropriate steps to enhance their alertness while on duty. If an employee feels that they are too fatigued to work safely, they shall report this to their line manager/Offshore Team Lead.
manager. The line manager shall address this report of fatigue and manage the risk with appropriate mitigations. All reports shall be taken seriously and employees who self-report shall be free from reprisal.

For Shell employees reporting fatigue ‘soft reporting’ shall be utilized with no records kept.

5.5.2. **Fatigue Risk Management and Reporting for contractors**

Shell expects that in order to demonstrate the effectiveness of a Contractor’s fatigue risk management controls, Key Performance Indicator (KPI) metrics will be tracked and reviewed annually with the Shell contract holder. Specific metrics may vary by business unit and may include:

- Monthly overtime Report, or any other mechanism for showing degree of compliance with planned Hours of Service
- Key Workforce Utilization data
- Exceptions to Hours of Service policy requested/approved
- Fatigue training completion rates

6. **INCIDENT INVESTIGATION**

The investigation of significant and high potential incidents will be conducted in a manner that facilitates the determination of the role, if any, of fatigue as a root cause or contributing cause to the incident. Guidance on what should be considered during these investigations as well as sample questions is provided in Appendix 3.

For PT/Wells-Deepwater (GoM) this occurs through the incident investigation process (root cause analysis appropriate for the level of incident).

Any time Fatigue is identified as a Root Cause or Contributing Factor, the Fatigue Related Findings should be listed in the incident description and in the Journal in FIM.

7. **ASSURANCE – PERIODIC REVIEW**

The annual HSSE management system review shall include a review of the FRMP to achieve continuous improvements.

A main objective of the review will be to ensure functional processes, systems and work practices are in full alignment with the FRMP and assurance mechanisms are fully utilized.
The following metrics will be discussed to assess effectiveness and opportunities to improve:

- Exceptions to hours of service and work duration limits requested/approved
- Incidents where fatigue of a Shell employee was determined to be a causal factor
- Fatigue training completion rates

8. REFERENCE

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