Daily Safety Message
Fatigue Management

Context:
We sometimes have to work long hours to meet deadlines.
Fatigue can cost money, and cost lives.

Causes:
- Fatigue can be caused by:
  ✓ Prolonged physical or mental effort
  ✓ Ongoing stress or anxiety
  ✓ Not getting enough sleep
- Fatigue is made worse by:
  ✓ Extended work hours
  ✓ Poor lighting, very warm or very cold conditions, or high noise levels
  ✓ Long periods doing the same task, or repetitive or boring tasks
- Fatigue can build up over several days.

Results:
- Fatigue, like alcohol, affects:
  ✓ Hand-eye coordination
  ✓ Reaction time (physical & mental)
  ✓ Memory and concentration
- Fatigue also causes problems with:
  ✓ Communication skills
  ✓ Ability to handle stress
  ✓ Decision making ability & judgment
- The effects of fatigue increase rapidly after about 8 hours on the job.

Prevention:
- At work:
  ✓ Take at least one day off per week.
  ✓ Have healthy snacks and stay hydrated.
  ✓ Maintain good lighting, comfortable temperatures and reasonable noise levels, where possible.
  ✓ Take regular breaks each shift.
  ✓ Move around or change positions frequently.
  ✓ Change tasks during the shift.
  ✓ Do tasks with intense physical or mental effort early in the shift.
- Off the job:
  ✓ Avoid coffee, energy drinks and other stimulants late in the day.
  ✓ Eat well and get enough exercise.
  ✓ Reduce noise and light levels an hour before bed.
  ✓ Follow a routine at bedtime.
  ✓ Get enough good-quality sleep.

Watch for signs of fatigue in your crew, and in the mirror!

Speakers Notes:
___________________________________
______________________
_____________________
_____________________
_____________________

Does anyone have any questions about how to do their job safely today?
symptoms of fatigue

- sleepy
- blurry vision
- sore
- feeling stiff
- speed creeping up & down
- slow reaction
- wandering over the other lane
- cramp
- hungry
- daydreaming
- seeing things
- humming in your ears
- making poor gea
- THIRSTY
- failing to notice other vehicles
- remember the last few kms?
Daily Safety Message Details
Fatigue Management

Context:
Project work often requires a lot of work in a short time period, especially during PMP’s. We often work long hours to meet deadlines, and fatigue can lead to poor decisions that cost money, or that cost lives.

Causes:
Fatigue can be caused by prolonged physical or mental effort, not getting enough good-quality sleep, ongoing stress or anxiety, or any combination of these factors. Fatigue can build up over several work days, especially with not enough sleep. It’s made worse by extended work hours, and long periods spent on the same task, or repetitive or boring tasks. Poor lighting, very warm or very cold conditions, and high noise levels all increase the effects of fatigue. Nightshift work and changing shift schedules significantly affect the body’s circadian rhythm. Long commutes to/from work and commitments outside of work also reduce sleep times.

Results:
Fatigue affects the body in the same way as alcohol in terms of both productivity and alertness; reducing hand-eye coordination and reaction time (both physical & mental), affecting memory and the ability to retain details, and decreasing alertness and concentration. It also causes problems with communication skills and the ability to handle stress, and decreases decision making ability & judgment. Worst of all, our ability to gauge our own level of fatigue decays rapidly as we get tired! **Note:** the effects of fatigue increase rapidly after about 8 hours on the job – decreasing productivity and increasing the risk of accidents on or off the job.

Prevention:
Fatigue management involves both workers and employers. Workers should eat well and stay hydrated, including healthy snacks between meals where possible, and avoid coffee, energy drinks and other stimulants late in the day. Getting about 8 hours of sleep, and getting enough exercise will help maintain alertness. A good bedtime routine helps ensure good-quality sleep: reduce noise and light levels an hour before bed, and avoid late-night TV or computer use. Alcohol and drugs interfere with sleep patterns, as do high levels of stress; get help if suffering from anxiety or dependency, before fatigue sets in and leads to an accident.

Work schedules should include at least one day off per week and regular breaks throughout the shift. Jobsites should have good lighting, comfortable temperatures and reasonable noise levels. Workers should not be assigned the same task for long periods – rotate tasks between workers, or set up the work so tasks will change throughout the shift to maintain attention, especially if the work itself is repetitive or boring, or if the worker is alone. Tasks that require intense physical or mental effort should be done early in the shift. Encourage workers to move around or change positions frequently. Arrange for local accommodation or drivers for workers with long commutes, if needed after a long shift.

**Watch for signs of fatigue in your crew, and in the mirror!**

Does anyone have any questions about how to do their job safely today?
Reference Material: Fatigue Management

- **Occupational Health and Safety Act**
  - O. Reg. 213/91 Construction Projects
  - O. Reg. 854 Mines and Mining Plants

- **Employment Standards Act, 2000**

- **Vale Golden Rules**
  - Golden Rule #1. The Fundamental Requirements

- **Vale SPI’s, Standards & Policies** - see [Vale Extranet Site](#)

- **Vale Contract Requirement Documents** - see [Vale Extranet Site](#)
  - General Requirements for Ontario Operations
    - Section 5.6.3 Schedule Details
    - Section 5.6.4 Employment Standards Act

- **Vale Extranet Site** [http://extportal.vale.com/PMO/](http://extportal.vale.com/PMO/)
  - click on **Forms** for:
    - NAV-GP-0284 Working Hours on Construction Projects Guideline
    - NAV-TP-0284 Working Hours - Construction Workers Exemption Approval Request
  - click on **PMP Safety**, under Planned Maintenance Periods (PMP), for:
    - Daily Safety Message, Fatigue Management – DM # 1274442
    - Other resources and information

- **MOL Website**
  - MOL Resource Page – Employment Standards

- **IHSA Website**
  - IHSA Tip Sheet - Driver Fatigue

- **Other Resources**
  - Canadian Sleep Institute
  - National Sleep Foundation
  - Fatigue_(CCOHS Canada)
  - Fatigue: Extended Work Hours & Safety in the Workplace (Worksafe Alberta)
  - Fatigue Risk Management: A Program Development Guide (Enform, Canada)
  - Work Schedules: Shift Work And Long Hours (NIOSH, USA)
  - Fatigue Management in Highway Construction (ELCOSH, AFL-CIO - USA)
  - Fatigue Management: What Construction Managers Should Know (AUS)
  - Tips - Managing Fatigue in the UK Construction Sector
  - Fatigue Management - TMS Consulting (Australia)

*The details listed above may not be up-to-date, always refer to the source documents.*
# Daily Safety Message – Fatigue Management

<table>
<thead>
<tr>
<th>Audit Date:</th>
<th>Auditor’s Name:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plant:</td>
<td>Auditor’s Company:</td>
</tr>
<tr>
<td>Area:</td>
<td>Site Supervisor:</td>
</tr>
<tr>
<td>Project #:</td>
<td>Project Name:</td>
</tr>
</tbody>
</table>

## Interactive Audit - Discussion Topics

<table>
<thead>
<tr>
<th>Question</th>
<th>Interactive Audit – Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Did you receive a safety message today?</td>
<td>How Many Workers Did You Talk To?</td>
</tr>
<tr>
<td>2. What was the topic of the safety message?</td>
<td># of Responses that Required Coaching</td>
</tr>
<tr>
<td>3. When was your last day off?</td>
<td></td>
</tr>
<tr>
<td>4. How long are your shifts?</td>
<td></td>
</tr>
<tr>
<td>5. Have you seen any signs of fatigue in yourself or others recently?</td>
<td></td>
</tr>
<tr>
<td>6. Will you be doing any high-risk activities today?</td>
<td></td>
</tr>
<tr>
<td>7. What extra precautions should you take if you’re tired?</td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td></td>
</tr>
</tbody>
</table>

## Notes

---

**Please send Audits to your Vale Representative & Tasha.Pinkerton@vale.com**  
**DM # 1294442 February 2018**
Daily Safety Message – Fatigue Management

Audit Date: ___________________________  Auditor’s Name: ___________________________
Plant: __________________________________ Auditor’s Company: ___________________________
Area: __________________________________ Site Supervisor: _____________________________
Project #: _____________________________  Project Name: _______________________________

<table>
<thead>
<tr>
<th>Field Conditions Audit</th>
<th># Acceptable</th>
<th># Unacceptable</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Signs of Worker Fatigue</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Posture, energy level, alertness.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Workplace Environment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Good temperature, lighting, noise / vibration levels.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Tasks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Tasks being rotated, not repetitive or boring, no long periods on the same task.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Jobsite set-up</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Worker able to move around, and/or change positions.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Risk Level</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Worker attentive enough for the hazards of the work.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes

__________________________

Please send Audits to your Vale Representative & Tasha.Pinkerton@vale.com  DM # 1294442 February 2018