

Case Study

Oil & Gas Controllers



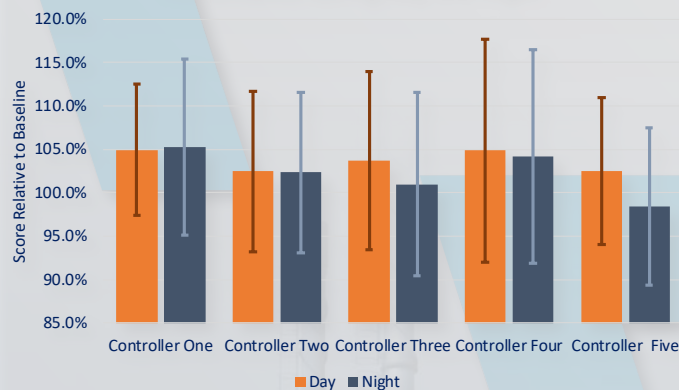
In an effort to discover if visibility into real-time alertness issues could help Operators in a 24/7 control room, an Energy Company selected 5 Operators to participate in a study with Predictive Safety's AlertMeter alertness test. The AlertMeter is a 60-second graphics test that records each person's cognitive performance. As the individual uses the test daily or several times during the shift, the system compares their score to their personal baseline resulting from reaction speed, accuracy, situational awareness, and consistent cognitive performance.

Charting these scores reveals useful information that may be used to further mitigate impairment risk through appropriate fatigue countermeasure use, better shift scheduling, and increased awareness on fatigue and impairment, leading to healthier sleep and nutrition habits.

The oil and gas control room has about 30 employees with a 5 week rotating shift. Over a period of twelve weeks, an iPad was set to the AlertMeter website in the control room, and alarms were set on the iPad to go off at different times of the day and night. When the alarm sounded, an employee would walk over and unplug the iPad, take the 60-second test, and hand it to the next Operator. When the last Operator had taken the test, they would take the iPad back to its spot in the room and plug it back in.



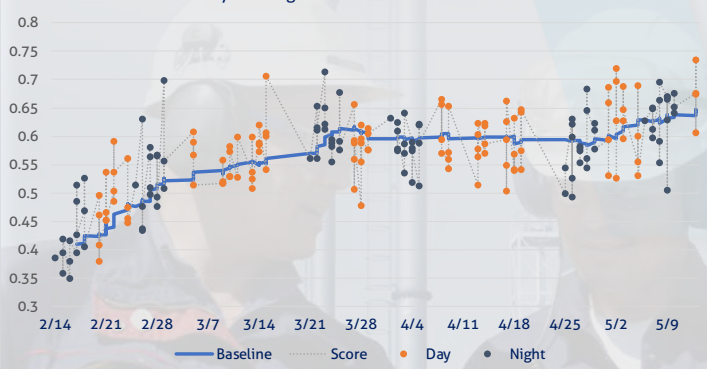
Performance during Day and Night



Controllers Three and Five show the highest difference in average alertness between the night and day shifts, which suggests more difficulty in adapting to circadian disruption than the other three controllers. This may indicate that:

- These controllers may not get enough recuperative sleep between shift cycles.
- These controllers may need to apply more appropriate or more consistent countermeasures to maintain alertness during the night shift.
- These controllers may need regular check-ins by coworkers or supervisors during the night shift to ensure they are keeping alert.

Day and Night Scores of Controller Two



Controllers One and Two show more consistent day/night performance, with Controller One doing slightly better during the night shift. This suggests that they are generally less affected by potential circadian disruption and are able to keep performance levels up regardless of shift time. This may indicate that:

- These controllers are more likely to get enough recuperative sleep between shift cycles.
- These controllers use appropriate and healthy countermeasures to maintain alertness, especially during the night shift.
- These controllers may be able to help coworkers in practicing good and healthy habits to encourage alertness throughout their shifts.