

# Safety & Performance

# Mining



**SSA** versions for Mining Example Reports for Mining V4.1b Equipment Operator V2.1a Supervisor V3.1 Report options



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# One third at risk!

# Ever wondered what is keeping the incident plateau up?

So you already know that unsafe conditions have given way to conclusive evidence about how unsafe acts outweigh all other causes in an **80:20** ratio Equipment is safety assessed, but do you know the limits of your people? The OHS Act makes you responsible.

# \* Systematic safety and performance improvement must address behaviour



A large scale survey and analysis of 54,168 persons from 1040 industrial, mining, construction and transport organisations in 2014 from the Australian region showed the following figures.

Capacity for	% of the 54,168 persons reporting poor capacity
Attention recovery - Resilience	24%
Mental Alertness	27%
Managing Fatigue	48%
Perception & Comprehension of risk	41%

The numbers show that on the **SSA** test of adequacy with respect to the four major risk measures, 15.7% of the total sample of 54168 persons tested were significantly below the minimum on all aspects and overall safe level of functioning. Specific deficits related to their ability to pay attention to what they are doing, low levels of alertness, poor self-regulation and management of fatigue was verified by nearly half as poor perception and ability to see the of risk. Consider - the impact on productivity and safety.

# Psyfactors can help you address the risk

# www.psyfactors.com



The SSA INVENTORY (MINING) v4.1b is a 115 question test incorporating mental state, safety competencies and preferred behaviours with respect to safety. Used for assessing the probability of lapses in mindfulness and safe behaviour in the normal functioning of people working in operational roles in mining and refining environments.

The SSA test addresses the person's non-technical safety skills through their ability to see and understand external risks, maintain attention of surrounding events, function with coordinated and reasoned action and to generally remain vigilant of any personal factors degrading own performance.



The SSA Inventory (Mobile Equipment Operator) v2.1a test is a 105 question test of ability to perform at the level of a wellfunctioning and normal adolescent or adult, relative to the alert performance required of a mobile equipment operator and driver.

This instrument is used primarily for assessing

mental functioning and basic capacity for safe behaviour ultimately as an operator of more complex mobile equipment such as forklifts, haul trucks, trains, buses, ship loaders and building cranes.



SSA INV (Supervisors) v3.1 test is a 121 question test of abilities and perceptions relative to the performance required of a fully functioning professional with responsibility for large scale assets.

This instrument is used primarily for assessing the capacity for the safe management of personnel in hazardous environs.

Whereas the SSA test typically addresses a person's non technical safety skills through their ability to see and understand external risks, maintain attention of surrounding events, function with coordinated and reasoned action and to generally remain vigilant of any human factors degrading performance, the focus of the managers and supervisors test is in <u>achieving safety through others</u> through understanding of human factors and effective crew resource management principles.



SSA Inv (Equipment Maintenance) V1.1c test is a 115 question test of ability to perform relative to that required of a technician engaged in industrial and mining maintenance and repair. This instrument is used primarily for assessing mental functioning and the capacity for sustained safe behaviour and performance with an emphasis on attention to detail.

The SSA test addresses the person's non technical self-management and safety skills through their ability to see and understand external risks, maintain attention of surrounding events, function with coordinated and reasoned action.

# SSA INVENTORY MINING v4.1b

PERSONAL STATUS Personal Resilience Mental Alertness SAFETY COMPETENCY General Hazard Awareness Perception Comprehension Defensive Safety Habits Safety Self Awareness Understands Fatigue SAFETY PREFERENCES Responsible for Safety Risk Avoidance Safety Conscientiousness

# **SSA IMOBILE EQUIPMENT OPERATOR 2.1a**

Team Road Safety Orientation

ATTENTION AND RECOVERY Personal Resilience Mental Alertness Manages Fatigue SELF MANAGEMENT **Defensive Safety Habits** Safety Self Awareness FUNCTIONAL ABILITIES Executive Functioning Perceptual Acuity Response Accuracy and Coordination Working Memory SAFETY PERSPECTIVE **Responsible for Safety Risk Perspective** Safety Conscientiousness

# SSA INV Supervisors V3.1

ATTENTION AND RECOVERY Positive Recovery Skills Mental Alertness Manages Fatigue THREAT AND ERROR MANAGEMENT SKILLS Anticipates Defends Understands Human Error **Risk Perception** FUNCTIONAL ABILITIES Perception Projection Working Memory TEAM RESOURCES MANAGEMENT SKILLS Participative Style **Team Safety Orientation Emotional Intelligence** SAFETY PERSPECTIVE **Responsible for Safety Risk Sensitivity** Safety Conscientiousness

# SSA Inv EQUIPMENT MAINTENANCE V1.1c

ATTENTION AND RECOVERY Personal Resilience Mental Alertness Manages Fatigue FUNCTIONAL ABILITIES **Executive Functioning** Perceptual Acuity Decision Speed Accuracy Working Memory **Detail Orientation** SELF MANAGEMENT **Defensive Safety Habits** Safety Self Awareness SAFETY PERSPECTIVE **Responsible for Safety Risk Perspective** Safety Conscientiousness



SSA Inventory Version V5.0 (R) (remedial) is a 44 item short test focused on 'present moment' key functional abilities required for maintenance and recovery of attention, perception, judgment and responses to maintain situational safety awareness in the workplace. The test is used as a 'next-day' rapid retest instrument.

The SSA INV (GRADUATES) v3.1a test is a 105

adolescent or adult, relative to the growing

performance required of a professional in

question test of ability to perform at the

level of a well-functioning and normal

This instrument is used primarily for

capacity for safe behaviour amongst

assessing mental functioning and basic

# SSA INVENTORY VERSION V5.0 (R)

ATTENTION AND RECOVERY Manages Fatigue Impulse Management Mental Alertness FUNCTIONAL ABILITIES **Executive Functioning** Working Memory **Choice Reaction Speed** 

# SSA INV GRADUATES v31a

ATTENTION AND RECOVERY Personal Resilience Mental Alertness Manages Fatigue FUNCTIONAL ABILITIES **Executive Functioning** Perceptual Acuity Accuracy and Coordination Working Memory SELF MANAGEMENT **Defensive Safety Habits** Safety Self Awareness SAFETY PERSPECTIVE Responsible for Safety **Risk Perspective** Safety Conscientiousness

# **SSA INV APPRENTICE v13**

SELF MANAGEMENT **Defensive Safety Habits** Safety Self Awareness Understands Fatigue FUNCTIONAL ABILITIES **Executive Functioning** Perceptual Acuity Accuracy and Coordination Working Memory MENTAL STATUS Stress Coping Status

# SSA INV ADMIN UTILITIES v11a

SAFETY BEHAVIOURS **Defensive Safety Habits** Safety Self Awareness Manages Fatigue SAFETY PERSPECTIVE Responsible for Safety **Risk Avoidance** Safety Conscientiousness PERSONAL STATUS **Coping Skills** Mental Alertness



# The SSA Resilience Test,

(SSA Extension) is a 66 item diagnostic instrument that assesses an individual's adequacy of managing stress reactions, fatigue and responsiveness relevant to the maintenance of performance and situational safety awareness in the workplace. The adequacy of results for this test is determined according to the environment and purpose.

# **SSA RESILIENCE V1.5**

# STRESS COPING SKILLS Copes Emotionally **Copes With General Role Stress** Copes With Workload CAPACITY FOR SELF MANAGEMENT Manages Fatigue **Positive Coping Habits** Maintains Mental Alertness





The SSA INV (APPRENTICE) v5.0 is a 75 question test of ability to perform safely at This instrument is used for assessing mental functioning and basic capacity for safe behaviour in personnel with little workplace experience or safety training such as apprentices and also for assessing functional ability of injured workers on return to work, in hazardous environments,.

The SSA INV (Admin & Utilities) v1.1a is an 85 question test of ability to maintain attention and awareness, recover from adverse events to perform at the level of a well-functioning and normal adult. Use this for assessing the capacity for safe behaviour in general utilities roles as in cooks, cleaners, admin staff etc in low personal risk environments, or in basic workplace induction.

candidates with limited work experience. the level of a normal adult.

training.

FIFO Retention Survey 2.0 (SSA Extension) is a 85 item diagnostic instrument that assesses an individual's commitment and adequacy of managing the stress of prolonged absence from family and the difficulty of managing crisis from long distance as a fly in – fly out worker. The arduousness of constant shift work, boredom and accumulation of fatigue. FIFO Retention Survey 2.0

STRESS & COPING SKILLS Copes Emotionally Copes With General Role Stress Copes With Workload CAPACITY FOR SELF MANAGEMENT Manages Fatigue Positive Coping Habits Impulse Management Maintains Mental Alertness BEHAVIOURAL EXPECTATIONS Behavioural Expectations



The HFA plus+ survey is a Human Factors Risk Analysis tool which is designed to identify the human contribution to incidents. The tool is augmented with a 'Workload' score as an aid to understanding the potential severity and likely reduction in safe performance in specific roles. The inclusion of the differentially assessed workload measure assists in dimensioning the human variable in an investigation process or as the target for training and prevention efforts.

The HFA Plus+ is a comprehensive human error framework for rapid risk analysis through 12 major categories of role related human failure and limitations in safety performance and compares with the Reason model of latent and precursor attributes and the HFACS taxonomy of errors and violations by Weigmann and Shappell

# **HFA Plus+** Risk Analysis Structure

JOB DESCRIPTION Title, Location, Purpose, Credentials WORK LOAD ASSESSMENT Subjective Estimate of Work Load SAFETY SUPERVISION Peer Support & Review Safety Monitoring (OHS Staff) Supervisor Role SAFETY CULTURE Area Safety Culture **OHS** Procedures **Organisational Safety Culture** TEAM MANAGEMENT **Grievance & Harassment Procedures Team Development & Training** Work Group relations **STRESS & FATIGUE MANAGEMENT EAP** Programs **First Aid Facilities** Shift Work Management Work Breaks & Meals TASK ATTRIBUTES **Multitasking Requirement Task Ambiguity Task Attention** Task Complexity **Task Documentation** Task Equipment Usability Task Process Compliance **Task Repetitiveness Task Rotation** Task Work Period COMPETENCY & TRAINING **Competency Review** Job & Task Training **Role Selection Criteria** 

# PERSON JOB READINESS

Balance, coordination and visual acuity Exercise & Diet Job Change Medical & Infirmity Checks **Medical & Infirmity Checks** Medication & Substance Abuse **Psychological Evaluations** SAFETY SYSTEMS Area Restricted Access **Emergency Procedures Training Equipment Safety Certification** Informed Area Safety System **Protective Clothing** Safety Incident Reporting PHYSICAL ENVIRONMENT Heating, Cooling & Drafts Housekeeping & Cleanliness Lighting Mobile Equipment Noise Levels **Open to Distractions** Proximity to Chemicals & Gases Vibration & Oscillation Weather Exposure SECURITY **Deviant Behaviour** Malicious Behaviour Sabotage Wilful Rule Breaking VIOLATIONS **Routine & Flagrant Violations** ERRORS **Cognitive Behavioural Errors** Errors due to Skills and Technique Judgement & Decision Making Knowledge & Rule Based Errors



# SSA INV (MINING) v4.1 (b) CLIENT REPORT

Client 2: PSYFACTORS PTY LTD (473)

Respondent 66053: Pete Z check Date of Birth: 16-02-1982 Telephone: 123231232 Email: pnr@psyfactors.com Address: sadasdd asddd 2222 TAS Australia

Assessment Date: 26 / 08 / 2015 01:32:35 PM





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# Overview and scale definitions of the SSA INV (MINING) v4.1 (b)

The SSA INVENTORY (MINING) v4.1 is a 115 question test incorporating mental state, safety competencies and preferred behaviours with respect to safety. Used for assessing the probability of lapses in mindfulness and safe behaviour in the normal functioning of people working in operational roles in mining and refining environments.

The SSA test addresses the person's non technical safety skills through their ability to see and understand external risks, maintain attention of surrounding events, function with coordinated and reasoned action and to generally remain vigilant of any human factors degrading performance.



The respondent's risk of loss of situational awareness (SA) can be determined by transferring the Ai score to the risk probability curve' on the graph. A score of less than 50 would suggest a greater or growing risk of loss of SA with stress, fatigue and other disruptive factors. A score greater than 55 provides for increasing certainty of sustained safe behaviour.

#### PERSONAL STATUS

#### **Manages** Fatigue

Extent of self management to avoid safety risks due to unrelieved stress or sleep loss. Mental Alertness Measures the extent of every day slips in perception, memory and coordination that indicate a loss of situational awareness. Personal Resilience Assesses the capacity to rapidly recover from adverse events, remain externally oriented and attentive to any risks.

#### SAFETY COMPETENCY

Defensive Safety Habits
Assesses behavioural habits as a personal defense to common hazards and unexpected adverse events.
General Hazard Awareness
Ability to comprehend the risk in an observed hazard and take necessary action.
Perception & Comprehension
Ability to detect the unusual, a change or sudden events in common contexts.
Safety Self Awareness
Involves knowledge of the effects of various stressors and warning signs of loss of attention on the self.

# SAFETY PREFERENCES

Responsible for Safety
Assesses the individual's belief in their ability to control their own safety outcomes.
Risk Avoidance
Assesses the person's tendency to maintain safety by avoiding obvious risk and uncontrollable situations.
Safety Conscientiousness
Assesses the capacity to display diligent and conscientious behaviour and avoid expedient short cuts despite perceived pressures.
Team & Road Safety Orientation

Assesses the capacity for individual tolerance and readiness to encourage safety by personal example.

# SUMMARY OF RESULTS

Respondent Final Score (Assessment Index): 12 Time taken: 10 minutes Expected: 35 minutes

#### Survey comprehension level:

Pete's preliminary results indicate that his comprehension of the text was adequate to successfully complete the survey.

• Pete's results indicate a negligible or well below average capacity with respect to the benchmark for safety minded persons, to maintain his situational awareness and master or cope with the safety needs of the role, with a special cautionary significance to his maintaining a balanced emotional state with increased stress.



#### Pete reports a greater competency in

- Anticipating the danger in the most common types of workplace safety incidents
- Capacity for mental and visual sharpness to detect the unusual or sudden events in common contexts
- Anticipating the hazardous effect of distractions, fatigue and variable diligence in self and others

# Pete's results indicate that caution should be exercised with respect to tasks requiring competent skills in

- · Maintaining a balanced emotional state with increased stress
- · Maintaining a clear mental state capable of normal perception and timely response as needed for safe behaviour
- Effectiveness in managing the self to avoid the cumulative or compounding effects of unrelieved fatigue.
- · Seeing the self as being actively responsible for the safety of self and others
- Identifying and avoiding risky situations that are beyond own skills
- · Avoiding expedient deviation from rules and procedures
- Maintaining respect and care for other road and mobile equipment users

#### PERSONAL STATUS

The capacity to maintain and recover attention is critical to safety. Poor attention can result from diminished presence of mind due to fixation and preoccupation or from a wandering mind due to fatigue a medical context, inadequate or disrupted personal habits. A lesser state may also result in an inability to switch rapidly between tasks and manage distractions. The component measures in this factor identify the particular vulnerability for this person. The factor measures present mental state enabling external awareness, typical speed of recovery and fatigue management.

#### **Manages Fatigue**

#### **Contribution to Safety & Productivity**

Extent of the recognition that accumulated fatigue has on personal performance to prevent breakdown in safe behaviour and vigilance. Ability to take practical steps to achieve quality of sleep, diet and exercise to ensure the capacity to pay attention to events and surroundings, control emotions, reduce errors of judgement or inadvertent rule breaking.

#### Effect on Performance (Rated as Well Below Average in range of 0-25)

• Pete's further results in this area confirmed the likelihood of breakdown due to cumulative fatigue effects on the person by impacting performance suggesting a negligible level of self management, sleep, diet, exercise and relaxation habits. Pete may increasingly show decreases in attention, concentration, and some increase in emotional reactivity. Extended periods in this state inevitably results in lowered on the job performance and safe behaviour.

# **Mental Alertness**

#### **Contribution to Safety & Productivity**

The mental alertness scale measures the individuals prevalence to failure in mental functioning as evidenced by every day slips in perception, memory and physical functions. The person subject to cognitive failure shows up as easily distracted with poor short term memory and a tendency to clumsy uncoordinated behaviour. Cognitive failure can be seen to make the person vulnerable to errors of omission and through frustration to expedient behaviour resulting in safety violations.

#### **Personal Resilience**

#### **Contribution to Safety & Productivity**

Involves the stability of mood and affect of the person as it impacts safety oriented behaviour by way of their diligence, alertness and situational awareness, energy and responsiveness in addition to the adequacy of interaction with others.

#### Effect on Performance

(Rated as Well Below Average in range of 0-25)

Pete reports a critical present tendency to failure in full and alert functioning as evidenced by every day slips in perception, memory and physical functions. Pete will likely show up as being very easily distracted, displaying poor short term memory and a tendency to clumsy uncoordinated behaviour increasing his vulnerability to errors of omission and through frustration to expediency and safety violations.

#### Effect on Performance

(Rated as Slightly Below Average in range of 51-90)

• Pete's coping skills appear to be very marginal at a below average level suggesting a tendency to some emotional instability and possibly signs of anxiety or even depression when under stress. Typical behaviour of individuals with lesser coping skills is a loss of a sense of humour, sensitivity and tendency to project their dissatisfaction by being critical of others and to complain about the things that prevent them from full performance. A difficulty in relaxing and possibly slower recovery when under load would likely show up as growing fatigue affecting both vigilance and responsiveness.

#### SAFETY COMPETENCY

The competency group of items are cognitive abilities that support the primary or most important attention measures in the test and demonstrate an unencumbered mind capable of mental flexibility, avoidance of fixation and relatively sound logic in decision making. A lesser result is generally experienced when the person is subject to an overwhelming stress due to emotional, medical or fatigue experiences blocking adequate perception and resultant decision making.

#### **Defensive Safety Habits**

# **Contribution to Safety & Productivity**

Defensive habits involve the monitoring of developments resources, weather, fatigue, personality conflicts, etc.. Anticipation of required actions. Asking the right questions. Testing assumptions, confirming understanding. Monitoring workload distribution. Reporting fatigue, stress and overload in self and others. Generally, observed to have 'presence of mind' such that most events seem to be expected.

#### Effect on Performance (Rated as Above Average in range of 111-200)

Pete's results indicate an above average and consistent ability to monitor developments, to anticipate required actions, ask the right questions, check assumptions and confirm understanding. Monitor workload distribution, report fatigue, stress and overload in self and others.

**Effect on Performance** 

(Rated as Above Average in range of 111-200)

Pete's results indicate an above average ability to

earthwork excavations, as a confirmation of an

alertness and greater depth of understanding of

workplace safety issues.

identify progressively more complex sequences of

work place hazards typically found in mining or large

#### **General Hazard Awareness**

#### **Contribution to Safety & Productivity**

A sequence of work place contexts representing expedient measures, hazards due to poor housekeeping, carelessness and specific and machine safety issues, designed to identify the respondents ability to identify hazardous circumstances as a test of alertness and understanding of basic safety issues.

#### **Perception & Comprehension**

#### **Contribution to Safety & Productivity**

The perceptual acuity component assesses perception and judgment of images and textual propositions in the context of low contrast, detail perception, verbal ideation, identification with distraction and object sequencing, to elicit the ability to detect the unusual in a visual or cognitive context. Very low scorers would tend to have more difficulty distinguishing aspects in their environment that may represent or develop into a hazard.

# Safety Self Awareness

#### **Contribution to Safety & Productivity**

The self awareness scale identifies the individuals knowledge of the effects of various stressors to reduce their capacity to function and maintain alertness to safety on the job.

Effect on Performance (Rated as Above Average in range of 111-200)

Pete's results on the basic test of perceptual and cognitive acuity was at the above average level suggesting no difficulty in distinguishing unusual differences or objects in the environment that may represent a hazard.

#### Effect on Performance (Rated as Average in range of 91-110)

Pete indicates an average degree of self-awareness, of what he does, expects, feels and insight or knowledge of the effects of various common stressors on the self that could reduce the capacity to function and maintain alertness to safety on the job.

# SAFETY PREFERENCES

The safety preferences factor measures the respondent's proactive mindset and sense of personal responsibility in managing safety together with the tendency to avoid circumstances that are beyond personal limitations. A lesser result on the measures would tend to impulsive and potentially rash decisions and an avoidance of responsibility for safety. The factor is an important dimension of attitudes to compliance with safety.

#### **Responsible for Safety**

# **Contribution to Safety & Productivity**

Involves the perception and belief the individual has in their ability to guide and influence what happens to them and others in the context of safety. Behaviour range is from the passive to the proactive with regards to safety.

#### Effect on Performance (Rated as Below Average in range of 26-50)

Pete reports a below average level of belief in his ability to control or influence what happens to him and others and would tend to be somewhat passive and reactive with regards to safety issues.

#### **Risk Avoidance**

#### **Contribution to Safety & Productivity**

Considers the tendency for the individual to purposefully seek out, respond to or avoid situations that are uncontrollable, require considerable skill, represent 'quick and dirty' approach to work or may result in punitive action. Higher scorers indicate the capacity to observe the rules, follow procedures and maintain a consistent degree of integrity in their approach to the work.

#### Effect on Performance (Rated as Below Average in range of 26-50)

• Pete reports a below average capacity to avoid risk indicating some tendency to seek out personally challenging situations and may respond to or fail to avoid situations that are uncontrollable and unsafe. Pete may sometimes tend to ignore the rules and procedures of work.

#### Safety Conscientiousness

# **Contribution to Safety & Productivity**

Involves the extent to which the individual is likely to display diligent and conscientious behaviour, avoiding rule breaking, expediency, group pressure and careless acceptance of others work to ensure consistently safe outcomes for themselves.

# Effect on Performance

(Rated as Slightly Below Average in range of 51-90)

Pete indicates a slightly below average capacity for diligent and conscientious behaviour, to avoid rule breaking, expediency, group pressure and careless acceptance of others work, as a way to ensure consistently safe outcomes.

#### **Team & Road Safety Orientation**

#### **Contribution to Safety & Productivity**

Addresses the readiness and capacity for the individual to respect and care for other road and mobile equipment users, display patience and encourage safety by example.

#### Effect on Performance

(Rated as Slightly Below Average in range of 51-90)

Pete seems to have a slightly below average degree of positive-ness in attitude to others, with a moderate or inconsistent level of interest in their safety needs and with a slightly casual or reluctant respect and care for the other members of the team, would be unlikely to display patience and encourage safety by example.

# INTERVIEW GUIDE & ALERTS

# **Easily Distracted**

Pete reports a greater tendency to be easily distracted and of losing track/awareness of his present task when interrupted. You should consider the severity of this by reviewing Pete's results on the Defensive Safety Habits scale. If Pete's results on both scales are low, it more strongly indicates that he is easily distracted.

#### Summary of possible indicators

- · tendency to drift off and daydream
- easily diverted from their own primary task
- changes focus at mention of a favourite topic
- can be preoccupied with trivial issues
- shows signs of fatigue
- has tendency to cyclic 'worry thinking'
- has an incomplete mental picture of the situation
- mind goes blank when under stress
- becomes confused and forgetful
- tendency to make poor decisions due lack of facts

#### Possible impacts on performance

People with a tendency to be easily distracted are often emotionally prompted by some internal stress or a demanding task which could range from feelings of boredom to panic with a corresponding need for emotional release (this is different from externally generated and sudden multiple distractors demanding attention). The split of attention and loss of continuity in their circumstances may result in a loss of 'situational awareness'. Their perception and responses to sudden demands risk being confused, inappropriate or indecisive through fear of making the wrong decision.

# How has this arisen in the past for Pete, how did he respond and what did he learn? Example exploratory questions:

- 1. Distractions are a typical part of the job. What are the personal signs that tell you that you are about to lose sight of your task?
- 2. Do you have any sort of technique that helps you stay in touch with the task, the changing circumstances and actions of others around you?
- 3. Have you been in the situation where an emerging threat (or risk) demanded your attention whilst you were attending to another one in progress? What were the circumstances and what did you do?
- 4. What do you do if you notice that it is becoming hard to maintain sufficient awareness of your surroundings?5. Do you do anything to prevent yourself from 'zoning out' when faced with tedious tasks?

# **Fatigue Prone**

Pete reports typical signs and symptoms of acute, and possibly (if prolonged) chronic fatigue. You should discuss this with Pete to determine its severity and what he does to minimise feelings of tiredness and loss of vitality and how this impacts on his job performance. This represent a significant potential risk factor in whether Pete is able to give sustainable performance at the required levels.

# Summary of possible indicators

- likely to daydream and not notice people
- easily distracted from demanding tasks
- fails to hear what is going on around them
- preoccupied with unimportant/unrelated factors
- prefers low mental effort tasks
- tendency to be mentally slow
- tendency to be forgetful
- unlikely to retain a mental picture of a situation
- tendency to go mentally blank when under stress
- · tendency to make reactive and poor quality decisons
- makes decisions based on incomplete facts

# How has this arisen in the past for Pete, how did he respond and what did he learn? Example exploratory questions:

- 1. Please tell us about a time when you felt a bit uncomfortable about what you were doing, like when driving home at the end of a night shift and how did you handle that?
- 2. What sort of things do you normally do to stay in touch with the changing circumstances around you?
- How do you ensure your alertness or recover your attention so as to be able to identify emerging risks or threats?
- 4. What do you typically do if you notice that it is hard to stay focused on your tasks or your surroundings?
- 5. Do you do anything to prevent yourself from 'zoning out' when faced with tedious tasks?

#### Possible Impacts on performance

People experiencing fatigue typically have reduced levels of performance, safety and productivity, they may fail to identify and appropriately respond to emerging situational risks and may inadvertently place or allow others to enter a situation of risk.

# **Makes Blunders**

Pete reports he can be clumsy and uncoordinated in his movements and that he has a tendency to sometimes make rash emotional outbursts and be inattentive. If Pete's results on the mental alertness and coping scales are also low, it indicates a need to further investigate this result with him.

#### Summary of possible indicators

- · uncoordinated eye-hand movements
- exercises poor judgement/decision making
- likely to daydream or not be attentive
- easily distracted
- drops things through hasty or careless actions
- fails to hear what is going on around them
- may report feeling overstressed
- may forget to fully complete tasks
- easily irritated by people or circumstances
- to do or get, i.e. the garage at home
- starts wrong machine or process
- throws the wrong thing away
- unintentionally hits wrong switches on machine
- has wandering thoughts due to fatigue and loses mental picture of what is going on around them

# Possible impacts on performance

Making blunders is a physical sign of what is going on in the person's mind. The feelings of awkwardness and self conscious movements are a sign of mental tension. The person would likely have considerable difficulty in paying attention to what they are doing, switching rapidly from one task to another, remembering their most recent actions and intentions, together with a loss in the quality of their communication skills and ability to explain issues. This can't remember what they went to a particular place mental freeze interferes with coordination resulting in dropped, incorrect or ineffectual hand, eye and leg movements.

# How has this arisen in the past for Pete, how did he respond and what did he learn? **Example exploratory questions:**

- 1. Many people are clumsy and uncoordinated at some time. What do you think being clumsy is about?
- When might you be most 'clumsy'?
- 3. How could you defend against clumsiness affecting your performance or safety?
- 4. If clumsiness is identified by the candidate as being about their mental blocks ask them about the way they manage their stress
- 5. When have you felt that your response to a situation or another person was 'over the top' (angry or emotional), what caused that and what did you do recover or repair the situation?

# **Failure of Memory**

Pete reports a greater tendency to loss of memory about everyday things. This may be due to stress, illness or frequently changing task demands. If Pete has also achieved low results on the coping, maintaining mental alertness, fatigue management and short term memory scales, it indicates that further investigation is needed to establish his present mental state and stress levels. Alternatively, it may also be useful to explore for a possible prior head injury or medication.

# Summary of possible indicators

- · can't remember intentions, places or names
- can't remember the detail of procedures
- forgets where they put things
- forgets to complete tasks
- constantly preoccupied
- needs to constantly reread things to ensure proper understanding
- poor ability to recall information when needed repeatedly checks that they have done things - i.e.
- going back to check they have locked a door performs a familiar or obvious task in the wrong
- sequence
- puts something to the side to do later on and then forgets to go back and do it
- throws the wrong thing away

# How has this arisen in the past for Pete, how did he respond and what did he learn? **Example exploratory questions:**

- 1. How would people that know you well describe your memory? Why?
- Why do you think it is good/poor about your memory? 2.
- 3. What sorts of things affect your memory for everyday things?
- 4. What things affect your memory in particular? How do you compensate for that?
- 5. Do you have a technique to remember names after meeting someone new? What are our names?
- 6. When do you find you have most difficulty remembering where you have put things?
- Do you sometimes use checklists?
- 8. How do you think having a poor memory could affect this job?
- 9. Were you aware that you could do things to improve your memory?
- 10. What other sorts of things occur to you about your memory and the need to improve it?

#### Possible impacts on performance

People experiencing a loss of 'presence of mind' also called 'situational awareness', typically become unaware of what is going on around them. Their perception and responses to sudden demands risks being confused, inappropriate or indecisive, the natural 'knee jerk' tendency to fall back to 'old habits' may result in the wrong decision being made and a failure to apply the correct solution to the situation.

# **Poorer Safety Attitudes**

Pete's results indicate a complacent attitude and lack of involvement with safety concerns or issues. Pete sees others as being responsible for ensuring safety and for responding to emerging risks. It is strongly recommended that you explore this with Pete to identify the extent that he is likely to avoid responsibility for his own safety and that of others.

# Summary of possible indicators

- more accident prone
- unlikely to monitor the safety of others
- unlikely to double check safety infoormation
- considers that the 'ends' justifies the 'means'
- believes everyone cheats on safety rules
- has unrealistic expectations regarding safety
- frequently reports feeling overstressed
- likely to give in to group pressure
- considers that people injured at work are just less lucky
- overlooking things due to pressure of work
- doesn't believe that paying attention affects safety
- thinks 'you need a real instinct for it to be safe at work'
- has attitude that personal safety is the responsibility of the organisation

# Possible impacts on performance

People with a 'poor safety attitude' tend to show up as inattentive and careless with a low appreciation of the risks to them in the workplace. They will justify that view with how ineffective or unworthy everything is of their personal contribution and commitment, Their discontent can come from a more physical source that resembles chronic fatigue or medical conditions where the person is affected by prescribed or illicit drugs. They can sometimes withhold personal effort or contribution due to suppressed frustration with a situation.

# How has this arisen in the past for Pete, how did he respond and what did he learn? Example exploratory questions:

- 1. How often have you found yourself doing whatever is necessary to get the work done no matter how irritating?
- 2. How do you deal with people who push you to do things?
- 3. How do you manage getting things done when it seems impossible to meet both the time and quality standard set for you?
- 4. What sort of situations can you think of where corners can be cut so that you can get things done more quickly?
- 5. Have you found that there were circumstances where you have not reported a safety risk? Why didn't you report it?
- 6. Do you have a special way to deal with your fatigue or in letting your feelings (frustrations) go?

# **Tendency to Impulsiveness**

Pete reports a tendency to look for quick and easy solutions and and of being reactive when under pressure. This indicates he is likely to be quite impulsive. When also associated with poorer safety habits and self-awareness, this may represent a significant risk factor. You should confirm with Pete the extent and the circumstances when he is most likely to experience this.

#### Summary of potential indicators

- poor ability to anticipate events
- easily distracted and forgets intended actions
- expects or assumes particular outcomes
- can be disruptive and finds fault with everything
- doesn't assess personal capability and performance before deciding/taking action
- · reacts quickly without fully thinking through things
- tendency to throw away the wrong thing
- unintentionally hits the wrong switches
- likely to take short cuts and ignore procedures
- displays a 'near enough is good enough' attitude in
  - proc

# How has this arisen in the past for Pete, how did he respond and what did he learn? Example exploratory questions:

- 1. How do you maintain focus when the task is boring or repetitive?
- 2. How do you deal with having to finish something to a specific time and standard, but it is impossible to do both?
- 3. Have you ever found yourself in an undesirable situation you could have avoided? How would you avoid that in future?
- 4. When you feel pressured at work, what do you do about it?
- 5. What do you do to minimise doing things without thinking?
- 6. Do you sometimes consider and evaluate how good your decision-making has been?
- 7. What strategies do you put in place to slow yourself down before acting?

The impulsive person is likely to operate on a 'short fuse' or a relatively intolerant mindset. A poorer ability to anticipate events and project consequences would likely mean that the wrong actions and decisions are made in a hurry. The low personal coping skills typically displayed by this type of person also suggests a reactivity and a tendency to blame others and to go looking for faults in others when when things go wrong. The person's inability to stay focused and monitor the capability and performance of the elements or people around them indicate a tendency to take short cuts and not fully apply procedures or safety controls.

**Possible Impacts on performance** 

# **Tendency to Complacency**

Pete's responses indicate he is likely to accept and expect that the actions of others will be compliant and that the working environment will be inherently safe. This behaviour is often a consequence of the complacency that can develop when a person has little or no direct experience of workplace events that deviate from safety, compliance or procedural requirements.

This creates a routine expectation that things will always be as they should and that verification is not necessary. This complacency results in reduced vigilance, and hence, lesser ability to respond when necessary, i.e. during an emerging risk or other hazardous situation. It is recommended that you verify the extent this could impact Pete's safety, hazard identification and compliance behaviour on the job.

#### Summary of possible indicators

- likely to daydream and not listen to people
- is easily distracted from their primary task
- fails to hear or ignores what is going on nearby
- avoids difficult or demanding tasks
- shows signs of fatigue
- has an incomplete mental picture of the situation
- not alert or mind goes blank when stressed
- failure to check leads to completion of wrong task
- will tolerate ambiguity and ignore uncertainty
- makes decisions based on incomplete facts
  is unlikely to recognise or challenge a visible problem
- tends not to inform others of important issues

In general, people with a tendency to complacency (a form of mental laziness) have few checking or confirmatory behaviours that ensure they remain safe or compliant with any degree of certainty or precision. They typically show an easy acceptance for and reliance upon the words or actions of others and which is characteristic of people who perceive they have a low level of personal responsibility for outcomes. Their lack of any effective monitoring of what is going on around them, or the behaviour of others suggests a greater likelihood they will ignore the signs of a progressive buildup of risk in operations and a likelihood they will react with ineffective actions to emergencies.

**Possible Impacts on performance** 

# How has this arisen in the past for Pete, how did he respond and what did he learn? Example exploratory questions:

- 1. How do you keep people informed of your status, intentions, expectations and standards?
- 2. What sort of things do you often do to make sure everything is operating as it should?
- 3. How much time do you normally spend checking on what people tell you on each shift?
- 4. In what circumstances would you not follow instructions?
- 5. What do you do if you are given information by a more senior person that is different from what it usually is?
- 6. What should happen to someone who falls asleep while on duty?

**Resilience** A secondary analysis of responses indicates that Pete may display a lesser capacity to adapt and recover under pressure, likely impacting perception, response and overall situational awareness. This may represent a distinct risk factor if working alone in unsupervised environments. You may need to explore if Pete has developed any compensatory behaviour to deal with this issue. Note that highly self-demanding individuals with a tendency to intolerance may also reflect this result.

# **Tendency to Ignore Risk**

Pete reports a slightly higher than average tendency to operate outside the rules and at his emotional limits. It is recommended you consider whether this behaviour could result in reduced safety, hazard identification or compliance in the job or working environment. If Pete's result on the Risk Perspective scale result is above the "norm", you should consider whether Pete is experiencing prolonged fatigue as this could increase his tendency to sometimes ignore caution.

#### Summary of possible indicators

- tends not to anticipate or look forward on events
- tends to ignore signs of sleepiness and fatigue
- tends to tolerate being stressed
- doesn't challenge and gives in to group pressure
- operates out of habit
- tends not to be mentally alert
- has an incomplete mental picture of situations
- is unlikely to monitor others or the situation
- ignores hazardous potential (i.e. drives in fog)
- inability to challenege, check or test information

# Possible impacts on performance

People who may be risk prone can typically be characterised as impulsive with an immediate need for gratification and are likely to avoid making the extra effort required to check or alter what they are doing. The inability to provide the mental effort may also result in a rebellious and non-compliant person with regard to the rules and protocols of the tasks and workplace. It should be noted that this characteristic is different from the behaviours of the person trained to manage various risks and hazards in their workplace (ie., aviation, public safety roles etc).

# How has this arisen in the past for Pete, how did he respond and what did he learn? Example exploratory questions:

- 1. What do you do to ensure you correctly understand the rules and SOPS that exist in your workplace?
- 2. When you notice others around you getting 'stressed out' what do you do?
- 3. When you notice that you are becoming 'stressed out' at work what do you do?
- 4. How do you balance the need to get things done with the need to following the rules and SOPS in the workplace?
- 5. When you have competing demands to 'get something done on time' but you have to follow a SOP which prevents you from doing that how do you decide what is the 'right thing to do'?

# Failure of Presence of Mind

Pete's responses suggest he has some tendency to lose 'presence of mind' or situational awareness (what is happening around him). You should explore this further with Pete to determine if there is any fatigue, illness, medication, lifestyle, task or emotional issues that could be interfering with his capacity to pay attention and remain constantly vigilant on the job.

#### Summary of possible indicators

- likely to daydream and not listen to people
- easily distracted from their primary task
- fails to hear what is going on around them
- is preoccupied with unimportant/unrelated factors
- shows signs of fatigue
- has a tendency for cyclic 'worry thinking'
  has an incomplete mental picture of the situation around them
- not mentally alert or mind goes blank
- not mentally alert of mind goes blank
   completes wrong task or throws wrong thing away
- makes decisions based on incomplete facts

Possible impacts on performance

People experiencing a loss of 'presence of mind' also called 'situational awareness' typically become unaware of what is going on around them. Their perception and responses to sudden demands risk being confused, inappropriate or indecisive. They may show a natural 'knee jerk' tendency to fall back to 'old habits' which may result in the wrong decision being made or a failure to apply the correct solution to the situation.

# How has this arisen in the past for Pete, how did he respond and what did he learn? Example exploratory questions:

- 1. Pete, please tell us about a time in your past work or personal life when you felt that you had difficitly paying attention to what you were doing, for example, when driving at the end of a night shift or some other time. How did you recognise that? What did you do about the situation? What did you learn from that experience?
- What sort of things do you normally do to stay in touch with the changing circumstances and actions of others around you?
- 3. How do you ensure that you stay alert and or recover your attention so as to be able to identify any emerging risks or sudden threats around you?
- 4. What do you do if you notice that it is hard to maintain your awareness of your surroundings?
- 5. Do you do anything to prevent yourself from 'zoning out' when faced with tedious tasks?



# SSA INV (MOBILE EQUIPMENT OPERATOR) v2.1a CLIENT REPORT

Client 2: PSYFACTORS PTY LTD (473)

Respondent 62553: Adam Person Date of Birth: 11-07-1985 Telephone: 04979999999 Email: pnr@psyfactors.com Address: 71 San gerome road Seville 9999 WA Australia

Assessment Date: 02 / 09 / 2014 10:19:52 AM





#### Overview and scale definitions of the SSA INV (MOBILE EQUIPMENT OPERATOR) v2.1a

The SSA Inventory (Mobile Equipment Operator) v2.1a test is a 105 question test of ability to perform at the level of a well functioning and normal adolescent or adult, relative to the alert performance required of a mobile equipment operator or driver. This instrument is used primarily for assessing mental functioning and basic capacity for safe behaviour ultimately as an operator of more complex mobile equipment such as forklifts, haultrucks, trains, buses, shiploaders and building cranes.

The SSA test addresses the person's non technical safety skills through their ability to see and understand external risks, maintain attention of surrounding events, function with coordinated and reasoned action and to generally remain vigilant of any human factors degrading performance.



The respondent's risk of loss of situational awareness (SA) can be determined by transferring the Ai score to the 'risk probability curve' on the graph. A score of less than 55 would suggest a greater or growing risk of loss of SA with stress, fatigue and other disruptive factors. A score greater than 55 provides for increasing certainty of sustained safe behaviour.

#### ATTENTION AND RECOVERY

Manages Fatigue

Extent of self management to avoid safety risks due to unrelieved stress or sleep loss. Mental Alertness Measures the extent of every day slips in perception, memory and coordination that indicate a loss of situational awareness. Personal Resilience The capacity to recover and maintain a balanced emotional state due to adverse circumstances.

#### SELF MANAGEMENT

Defensive Safety Habits Assesses behavioural habits as a personal defense to common hazards and unexpected adverse events. Safety Self Awareness Involves knowledge of the effects of various stressors and warning signs of loss of attention.

#### FUNCTIONAL ABILITIES

# **Executive Functioning**

Measures the use of logic to detect errors and avoid developing hazards. Perceptual Acuity Ability to detect the unusual, a change or sudden events in common contexts. Response Accuracy and Coordination Measures the ability to make decisions, respond quickly and accurately despite distractions. Working Memory Assesses the capacity for recall of short term memory under stress.

#### SAFETY PERSPECTIVE

Responsible for Safety Involves the individual's belief in their ability to influence their own safety. Risk Perspective Considers the individual's tendency to seek out or tolerate risky situations. Safety Conscientiousness Involves the capacity of the individual to display diligent and conscientious behaviour.

# SUMMARY OF RESULTS

Respondent Final Score (Assessment Index): 54 Time taken: 76 minutes Expected: 40 minutes

Adam's results indicated no difficulty in comprehension of the initial test questions.

Adam's results indicate a below average capacity with respect to the benchmark for safety minded persons, to maintain his situational awareness and master or cope with the safety needs of the role, with a special cautionary significance to his anticipating the hazardous effect of distractions, fatigue and variable diligence in self and others.



#### Adam reports a greater competency in

- Present extent of the capacity to avoid loss of perception and vigilance due to becoming mentally overwhelmed by fatigue, illness or overload
- · Ability to remember and recall 'short term' information when needed
- Avoiding expedient deviation from rules and procedures

# Adam's results indicate that caution should be exercised with respect to tasks requiring competent skills in

- · Anticipating the hazardous effect of distractions, fatigue and variable diligence in self and others
- · Being able to notice when various human factors are impacting own mental and physical performance
- · The capacity for mental and visual sharpness to detect the unusual or occasional event in common contexts

# ATTENTION AND RECOVERY

# **Manages Fatigue**

#### **Contribution to Safety & Productivity**

Extent of the recognition that accumulated fatigue has on personal performance to prevent breakdown in safe behaviour and vigilance. Ability to take practical steps to achieve quality of sleep, diet and exercise to ensure the capacity to pay attention to events and surroundings, control emotions, reduce errors of judgement or inadvertent rule breaking.

# Effect on Performance (Rated as Average in range of 91-110)

Adam's further results in this area indicate an average and positive ability to manage cumulative fatigue effects which impact performance with good self management sleep, diet, exercise and relaxation habits, which would normally and otherwise impact performance.

# **Mental Alertness**

#### **Contribution to Safety & Productivity**

The cognitive capacity scale measures the individuals prevalence of failure in mental functioning as evidenced by every day slips in perception, memory and physical functions. The person subject to cognitive failure shows up as easily distracted with poor short term memory and a tendency to clumsy uncoordinated behaviour. Cognitive failure can be seen to make the person vulnerable to errors of ommission and through frustration to expedient behaviour resulting in safety violations.

#### **Effect on Performance** (Rated as Above Average in range of 111-200)

Adam reports an above average present capacity to maintain full and alert functioning with a very low tendency to be distracted or likely to forget things or experience clumsy behaviour leading to errors of omission and safety violations.

#### **Personal Resilience**

#### **Contribution to Safety & Productivity**

Involves the stability of mood and affect of the person as it impacts safety oriented behaviour by way of their diligence, alertness and situational awareness, energy and responsiveness in addition to the adequacy of interaction with others.

# Effect on Performance (Rated as Average in range of 91-110)

Adam's coping skills are reported as being in the average range indicating generally good emotional stability and capacity to remain positive, assisting his personal recovery, vigilance and response under stress. Adam's presentation would be generally marked by an active attempt to cope and keep an objective perspective.

# SELF MANAGEMENT

# **Defensive Safety Habits**

# **Contribution to Safety & Productivity**

Defensive safety habits refers to the person's perception and understanding of themselves and the environment. Involves monitoring developments resources, weather, fatigue, personality conflicts, etc.. Anticipates required actions. Asks the right questions. Tests assumptions, confirms understanding. Monitors workload distribution. Reports fatigue, stress and overload in self and others. Generally, has 'presence of mind' such that most events seem to be expected.

# Effect on Performance

(Rated as Slightly Below Average in range of 51-90)

Adam's results indicate a slightly below average ability to maintain situational awareness by monitoring developments, to anticipate required actions, ask the right questions, check assumptions and confirm understanding. Monitor workload distribution, report fatigue, stress and overload in self and others.

#### Safety Self Awareness

#### **Contribution to Safety & Productivity**

Effect on Performance (Rated as Slightly Below Average in range of 51-90)

The self awareness scale identifies the individuals knowledge of the effects of various stressors and early signs of loss of attention, focus and vigialnce that reduce their capacity to function and maintain alertness and awareness of errors or safety on the job. Adam indicates a slightly below average level of self awareness, insight or knowledge of the effects of various common stressors on the self that could reduce the capacity to function and maintain alertness to safety on the job.

# FUNCTIONAL ABILITIES

# **Executive Functioning**

#### **Contribution to Safety & Productivity**

A person's 'executive' functioning involves the mental ability to plan, organise, project outcomes and discern a logical sequence in both practical and abstract tasks. The level of 'executive' functioning indicates the person's capacity which is essential to accurate and consistent task performance and in identifying and projecting the hazards in any context.

#### Effect on Performance (Rated as Average in range of 91-110)

Adam indicates an average ability to plan, organise, project outcomes and discern a logical sequence in both practical and abstract tasks. Providing a moderate contribution to Adam's safety mindfulness and capacity to avoid risk.

# **Perceptual Acuity**

#### Contribution to Safety & Productivity

The perceptual acuity component assesses perception and judgment of spatial and textual propositions in the context of low contrast, detail perception, verbal ideation, identification with distraction and object sequencing, to elicit the ability to detect the unusual in a visual or cognitive context. Very low scorers would tend to have more difficulty distinguishing aspects in their environment that may represent or develop into a hazard.

#### **Response Accuracy and Coordination**

#### **Contribution to Safety & Productivity**

Ability to operate in a timely coordinated way in the context of perceiving, deciding and responding accurately to a specific stimulus against various distractions, indicating a normal level of neurological functioning necessary for sustained accurate task performance and safe behaviour through timely responses.

#### Effect on Performance

(Rated as Slightly Below Average in range of 51-90)

Adam's results on the basic test of perceptual and cognitive acuity was at the slightly below average level suggesting some difficulty in distinguishing unusual differences or objects in the environment that may represent a hazard.

#### Effect on Performance (Rated as Average in range of 91-110)

Adam indicates an average or normal level of ability to operate in a timely coordinated way in the context of perceiving, deciding and responding accurately to a specific stimulus, indicating an adequate level of neurological functioning necessary for safe behaviour.

# Working Memory

#### **Contribution to Safety & Productivity**

Considers the ability to maintain a level of memory functioning involving short term situationally specific or episodic retrieval, indicating the capacity to retrieve and manipulate data necessary for the safe execution of a task. Effect on Performance (Rated as Above Average in range of 101-300)

Adam's results indicated an average to well above average ability to maintain a level of memory functioning involving short term situationally specific or episodic retrieval, indicating a competent capacity to resume interrupted intentions, retrieve and manipulate data necessary for the safe execution of a task.

# SAFETY PERSPECTIVE

# **Responsible for Safety**

# **Contribution to Safety & Productivity**

Involves the perception and belief the individual has in their ability to guide and influence what happens to them and others in the context of safety. Behaviour range is from the passive to the proactive with regards to safety.

#### **Risk Perspective**

#### **Contribution to Safety & Productivity**

Considers the tendency for the individual to purposefully seek out, respond to or avoid situations that are potentially uncontrollable, require considerable skill, represent 'quick and dirty' approach to work or may result in punitive action. Higher scorers indicate the capacity to observe the rules, follow procedures and maintain a consistent degree of integrity in their approach to the work.

#### Safety Conscientiousness

#### Contribution to Safety & Productivity

Involves the extent to which the individual is likely to display diligent and conscientious behaviour, avoiding rule breaking, expediency, group pressure and careless acceptance of others work to ensure consistently safe outcomes for themselves.

# Effect on Performance (Rated as Average in range of 91-110)

Adam reports an average level of belief in his ability to control or influence what happens to him and others and would generally tend to be more proactive with regards to own or others safety.

# Effect on Performance (Rated as Average in range of 91-110)

Adam reports an average tendency to avoid situations that are personally too challenging, uncontrollable or unsafe. Adam would generally or mostly observe rules, procedures and direct instructions on the job.

#### Effect on Performance (Rated as Above Average in range of 111-200)

Adam indicates an above average degree of diligence and conscientiousness in behaviour, avoiding rule breaking, expediency, group pressure and or otherwise careless acceptance of others work to ensure consistently safe outcomes.

# **INTERVIEW GUIDE & ALERTS**

# **Tendency to Complacency**

Adam's responses indicate he is likely to accept and expect that the actions of others will be compliant and that the working environment will be inherently safe. This behaviour is often a consequence of the complacency that can develop when a person has little or no direct experience of workplace events that deviate from safety, compliance or procedural requirements.

This creates a routine expectation that things will always be as they should and that verification is not necessary. This complacency results in reduced vigilance, and hence, lesser ability to respond when necessary, i.e. during an emerging risk or other hazardous situation. It is recommended that you verify the extent this could impact Adam's safety, hazard identification and compliance behaviour on the job.

#### Summary of possible indicators

- likely to daydream and not listen to people
- is easily distracted from their primary task
- · fails to hear or ignores what is going on nearby
- · avoids difficult or demanding tasks
- shows signs of fatigue
- has an incomplete mental picture of the situation
- not alert or mind goes blank when stressed
- failure to check leads to completion of wrong task
- will tolerate ambiguity and ignore uncertainty
- makes decisions based on incomplete facts
- is unlikely to recognise or challenge a visible problem
- tends not to inform others of important issues

In general, people with a tendency to complacency (a form of mental laziness) have few checking or confirmatory behaviours that ensure they remain safe or compliant with any degree of certainty or precision. They typically show an easy acceptance for and reliance upon the words or actions of others and which is characteristic of people who perceive they have a low level of personal responsibility for outcomes. Their lack of any effective monitoring of what is going on around them, or the behaviour of others suggests a greater likelihood they will ignore the signs of a progressive buildup of risk in operations and a likelihood they will react with ineffective actions to emergencies.

**Possible Impacts on performance** 

# How has this arisen in the past for Adam, how did he respond and what did he learn? Example exploratory questions:

- 1. How do you keep people informed of your status, intentions, expectations and standards?
- 2. What sort of things do you often do to make sure everything is operating as it should?
- 3. How much time do you normally spend checking on what people tell you on each shift?
- 4. In what circumstances would you not follow instructions?
- 5. What do you do if you are given information by a more senior person that is different from what it usually is?
- 6. What should happen to someone who falls asleep while on duty?

# **Tendency to Ignore Risk**

Adam reports a slightly higher than average tendency to operate outside the rules and at his emotional limits. It is recommended you consider whether this behaviour could result in reduced safety, hazard identification or compliance in the job or working environment. If Adam's result on the Risk Perspective scale result is above the "norm", you should consider whether Adam is experiencing prolonged fatigue as this could increase his tendency to sometimes ignore caution.

#### Summary of possible indicators

- · tends not to anticipate or look forward on events
- · tends to ignore signs of sleepiness and fatigue
- tends to tolerate being stressed
- doesn't challenge and gives in to group pressure
- operates out of habit
- tends not to be mentally alert
- has an incomplete mental picture of situations
- is unlikely to monitor others or the situation
- ignores hazardous potential (i.e. drives in fog)
- inability to challenge, check or test information

Possible impacts on performance

People who may be risk prone can typically be characterised as impulsive with an immediate need for gratification and are likely to avoid making the extra effort required to check or alter what they are doing. The inability to provide the mental effort may also result in a rebellious and non-compliant person with regard to the rules and protocols of the tasks and workplace. It should be noted that this characteristic is different from the behaviours of the person trained to manage various risks and hazards in their workplace (ie., aviation, public safety roles etc).

# How has this arisen in the past for Adam, how did he respond and what did he learn? Example exploratory questions:

- 1. What do you do to ensure you correctly understand the rules and SOPS that exist in your workplace?
- 2. When you notice others around you getting 'stressed out' what do you do?
- 3. When you notice that you are becoming 'stressed out' at work what do you do?
- 4. How do you balance the need to get things done with the need to following the rules and SOPS in the workplace?
- 5. When you have competing demands to 'get something done on time' but you have to follow a SOP which prevents you from doing that how do you decide what is the 'right thing to do'?

# **Cognitive Performance**

Adam's performance on the functional cognitive ability items was low indicating he had difficulty in providing an adequate level of required mental effort to complete the tasks. It is recommended that you compare Adam's results on working memory and speed of decisions and reaction scales (See "Functional Abilities" on page 4 of report) as a confirmation of this.

In particular, please consider if Adam's result is due to lesser cognitive ability or the result of his poor application (understanding and familiarity) or effort on the task. If the result is due to poor application and effort, that suggests potential carelessness by Adam where routine tasks are concerned or a high level of fatigue, which have direct implications for his safety, hazard identification and compliance performance.

# Summary of possible indicators

- lesser accuracy in assessing situations
- poor coordination (mental/physical)
- tendency to hesitate (self doubt)
- susceptible to confusion
- avoids tasks requiring mental effort
- tendency to make errors
- tendency to be forgetful
- unlikely to retain a mental picture of a situation
- tendency to go mentally blank under stress
- tendency to make reactive/poor quality decisions
- will make decisions based on incomplete facts
- may be prone to impulsiveness
- may experience above average anxiety

# Possible impacts on performance

A ffects the accuracy and speed of assessment and decision making and their ability to interpret the meaning or consequence of information or actions. May also demonstrate a lesser ability to correctly and quickly resume a task from the point they were at prior to a distraction. Their attention to the detail of tasks and what is in the environment tends to be poorer and the ability to recognise sequences and patterns and detect the unusual in events or behaviour is similarly lacking. Overall, the critical ability to interpret and recall information at the time needed to make correct decisions when faced with conflicting information tends to be poor.

# How has this arisen in the past for Adam, how did he respond and what did he learn? Example exploratory questions:

- 1. Tell us about a situation where you had too many things happening all at once and what you did to effectively manage the tasks and results.
- 2. Please describe in detail what the features were in the last place you were sitting while waiting for this interview.
- 3. What sort of things do you normally do to stay focused on the job or task?
- 4. How do you make sure your assessments of situations or tasks are based on fact and not just assumptions?
- 5. What do you do when you notice that you are getting anxious and it is hard to think or concentrate ?6. How do you prevent yourself from 'blanking out' when faced with having to make urgent and critical
- decisions?

# Fails to Think Ahead

Adam seems to experience some difficulty in maintaining mental alertness, or questioning the available information in a situation. This reduces the likelihood that Adam will think ahead about how a situation might evolve, the possible outcomes that may result and the defensive action that he needs to take to prevent hazards and risks from escalating. Because of this, Adam may be caught unaware by new or emerging hazards and exposed to avoidable risk. It is recommended that Adam's typical behaviour be discussed with him.

# Summary of possible indicators

#### • fails to anticipate events

- rarely calculates or considers probable outcomes
- seldom confirms understanding
- unlikely to detect converging vehicles on roads
- tendency to go along with 'group think'
- unlikely to have a full mental picture of
- surroundings unlikely to be described as 'mentally alert'
- fails to adequately monitor the capability of an event/machine
- tendency not to be mentally present and aware
- unlikely to question/test information given to them
- unlikely to want to improve their personal status

People with a poor tendency to look or think ahead typically become unaware of what is going on around them. Their perception and responses to sudden changes or demands risk being reactive, confused, indecisive, inappropriate or too late to apply the correct solution to a problem. In short, everything is a surprise to them (with the typical excuse that 'no one told me!').

**Possible Impacts on performance** 

At a lesser level, this characteristic may also affect their relationships with others through lack of understanding of the impact of their behaviour and communication. This type of person also tends to fail to ensure they are adequately rested and prepared for their work.

# How has this arisen in the past for Adam, how did he respond and what did he learn? **Example exploratory questions:**

- 1. How much time would you normally spend familiarising yourself with things like procedures or safety manuals?
- 2. What do you do to stay in touch with the changing circumstances and actions of others around you?
- 3. When are you most relaxed in your job and what is the task you find easiest to do without effort?
- 4. How do you ensure that you stay alert and/or recover your attention so as to be able to do the job to the required standard?
- 5. What do you do if you notice that it is hard for you to maintain full awareness of your surroundings? \*\*\*How hard do you find it to anticipate guess what someone will do after speaking to them. How do you rate 6. vourself?
- What specifically do you do to prevent yourself from 'zoning out' when faced with boring tasks? 7.
- 8. What would you say the key attribute of 'Sherlock Holmes' is in those stories about the mythical investigator?



# SSA INV (SUPERVISORS) V3.1 CLIENT REPORT

Client 2: PSYFACTORS PTY LTD (473)

# Respondent 72213: Bob Miner Date of Birth: 31-05-1985 Telephone: 0396459800 Email: pnr@psyfactors.com Address: Suite 615, 370 St Kilda Rd Melbourne 3004 VIC Australia

# Assessment Date: 15 / 07 / 2016 12:40:33 AM

# SURVEY DESCRIPTION

SSA Inv (Supervisors) v3.0 test is a 121 question test of abilities and perceptions relative to the performance required of a fully functioning supervisor with responsibility for teams and assets. This instrument is used primarily for assessing the capacity for positive self-regulation and management of the safe behaviour of others.

The SSA test addresses the person's non technical safety skills through their ability to see and understand external risks, maintain attention of surrounding events, function with coordinated and reasoned action and to generally remain vigilant of any human factors anticipating the reduction of performance in self and others.





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# Overview and scale definitions of the SSA INV (SUPERVISORS) V3.1

SSA Inv (Supervisors) v3.0 test is a 121 question test of abilities and perceptions relative to the performance required of a fully functioning supervisor with responsibility for teams and assets. This instrument is used primarily for assessing the capacity for positive self-regulation and management of the safe behaviour of others.

The SSA test addresses the person's non technical safety skills through their ability to see and understand external risks, maintain attention of surrounding events, function with coordinated and reasoned action and to generally remain vigilant of any human factors anticipating the reduction of performance in self and others.



The respondent's risk of loss of situational awareness (SA) can be determined by transferring the Ai score to the 'risk probability curve' on the graph. A score of less than 55 would suggest a greater or growing risk of loss of SA with stress, fatigue and other disruptive factors. A score at or greater than 60 provides for increasing certainty of sustained safe behaviour.

#### SELF-REGULATION

#### **Manages Fatigue**

Extent of self management to avoid safety risks due to unrelieved stress or sleep loss. **Mental Alertness** Measures the extent of every day slips in perception, memory and coordination that indicate a loss of situational awareness. **Positive Recovery Skills** Involves the capacity to maintain and recover a balanced unpreoccupied emotional state due to adverse circumstances.

#### FUNCTIONAL ABILITIES

Perception & Projection Measures the individual's mental and visual sharpness in detecting potential hazards. Working Memory

Assesses the ability to retain and recall information in the short term as a defense to potential errors of omission and distraction.

#### THREAT AND ERROR MANAGEMENT SKILLS

#### Anticipates & Defends

Assesses the understanding of the need to anticipate, monitor and test for the potential of adverse events. **Understands Human Error** Assesses the awareness and impact that various human factors have on the performance of others.

#### TEAM RESOURCES MANAGEMENT SKILLS

#### Emotional Intelligence

Measures the ability to know and utilise the emotions and intentions of others so as to achieve safety objectives. **Participative Style** Assesses the ability to develop cooperation within the team, through encouragement and participation. **Team Safety Orientation** Involves the individual's capacity to care for the safety of team members.

# SAFETY PERSPECTIVE

Responsible for Safety Involves the individual's belief in their ability to influence their own safety. **Risk Sensitivity** Considers the individual's tendency to seek out or tolerate risky situations. **Safety Conscientiousness** Involves the capacity of the individual to display diligent and conscientious behaviour.

# SUMMARY OF RESULTS

Respondent Final Score (Assessment Index): 41 Time taken: 17 minutes Expected: 40 minutes

#### Survey comprehension level:

Bob's preliminary results indicate that his comprehension of the text was adequate to successfully complete the survey.

Bob's results indicate a below average capacity with respect to the benchmark for safety minded persons, to maintain his situational awareness and master or cope with the safety needs of the role, with a special cautionary significance to his capacity to maintain a balanced emotional state with increased exposure to adverse circumstances.



#### Bob reports a greater competency in

- · Ability to think ahead, detect errors, avoid pitfalls and infer developing hazards in a situation
- Ability to remember and recall 'short term' information when needed

# Bob's results indicate that caution should be exercised with respect to tasks requiring competent skills in

- Capacity to maintain a balanced emotional state with increased exposure to adverse circumstances
- · Present capacity to avoid loss of perception and vigilance, generally cope with fatigue, illness or overload
- Effectiveness in managing the self to avoid the cumulative or compounding effects of unrelieved fatigue.
- · Anticipating the effect of distractions, fatigue and variable diligence in self and others
- Ability to see the potential for breakdown of safety awareness in self and others.
- · Develop cooperation and teamwork, seek and encourage participation with others
- Maintaining respect and care for the safety of the crew and other personnel
- · Ability to perceive and appraise the emotions of self and others to further safe behaviour and avoid wasteful conflict.
- · Seeing the self as being actively responsible for the safety of self and others
- Identifying and avoiding risky situations that are beyond own skills
- Avoiding expedient deviation from rules and procedures

# **INTERVIEW GUIDE & ALERTS**

**OVERALL CHARACTERISTICS** Thumbsketch of possible behaviours (Note: descriptive only)

Keywords: Spontaneous, Practical, Friendly and Harmonious.

- Bob's personality tends to reflect his basic curiosity and openness to experience. A natural adaptivness and flexibility underlie a spontaneous, and practical, person.
- Bob is likely to be effective at communicating with a good-natured realism coupled with an open and perceptive nature suggests a role as a diplomat or negotiator or mediator, with the ability to encourage agreement, compromise and suggest solutions, without imposing pet ideas or opinions on others.
- As a keen observer, Bob may display an ability to deal effectively with large quantities of data, if the subject has to do with the personal realm.
- A basically optimistic, here-and-now temperament suggests a practical, spontaneous individual, happiest living life as it comes along rather than walking the straight and narrow path defined by schedules, commitments, obligations, duties, rules, regulations and others' expectations of what should be done. Nevertheless, happiness is being absorbed in some project, with the capacity to work long hours, displaying tenaciousness, patience and perseverance while the passion lives. When that wanes, completing things may get less effort.
- Bob is likely to thrive on action, and show up good in a crisis. Dealing with the unknown may simply seem a challenge to the ability to apply well-practiced skills to solve problems. On the other hand when challenge disappears there may be a tendency to look for greener pastures and another opportunity to become engaged.

#### POSSIBLE SAFETY RELATED ISSUES

- Bob's possible reluctance to organise time and develop plans, create do-able schedules to achieve reasonable goals may be interpreted as instability and potential unreliability by others.
- A commitment to being tactful and attentive to other people's needs and expectations may divert energy and application from the main activity.
- A tendency to ignore bad news, together with a need to only have a positive impact on others, makes it difficult to exert discipline on others to ensure safety compliance and attentiveness to hazards.
- Bob prefers companionship to being alone. The need to please others can have the effect of suppressing timely questions or objections, resulting in acquiescence, going along even though a thing may be wrong or unsafe.
- Bob may hesitate to express own opinions, to avoid antagonising others.
- Bob's natural generosity and need to 'go-along' may be exploited by others to thwart the rules and constraints that ensure group safety.

# Report on: **Bob Miner** 15 / 07 / 2016 12:40 AM **Critical Results**

# **Tendency to Complacency**

Bob's responses indicate he is likely to accept and expect that the actions of others will be compliant and that the working environment will be inherently safe. This behaviour is often a consequence of the complacency that can develop when a person has little or no direct experience of workplace events that deviate from safety, compliance or procedural requirements.

This creates a routine expectation that things will always be as they should and that verification is not necessary. This complacency results in reduced vigilance, and hence, lesser ability to respond when necessary, i.e. during an emerging risk or other hazardous situation. It is recommended that you verify the extent this could impact Bob's safety, hazard identification and compliance behaviour on the job.

#### Summary of possible indicators

- likely to daydream and not listen to people
- is easily distracted from their primary task
- fails to hear or ignores what is going on nearby
- avoids difficult or demanding tasks
- shows signs of fatigue
- has an incomplete mental picture of the situation
- not alert or mind goes blank when stressed
- failure to check leads to completion of wrong task
- will tolerate ambiguity and ignore uncertainty
- makes decisions based on incomplete facts
- is unlikely to recognise or challenge a visible problem
- tends not to inform others of important issues

#### Possible Impacts on performance

In general, people with a tendency to complacency (a form of mental laziness) have few checking or confirmatory behaviours that ensure they remain safe or compliant with any degree of certainty or precision. They typically show an easy acceptance for and reliance upon the words or actions of others and which is characteristic of people who perceive they have a low level of personal responsibility for outcomes. Their lack of any effective monitoring of what is going on around them, or the behaviour of others suggests a greater likelihood they will ignore the signs of a progressive buildup of risk in operations and a likelihood they will react with ineffective actions to emergencies.

- How has this arisen in the past for Bob, how did he respond and what did he learn? Example exploratory questions:
  - 1. How do you keep people informed of your status, intentions, expectations and standards?
  - 2. What sort of things do you often do to make sure everything is operating as it should?
  - 3. How much time do you normally spend checking on what people tell you on each shift?
  - 4. In what circumstances would you not follow instructions?
  - 5. What do you do if you are given information by a more senior person that is different from what it usually is?
  - 6. What should happen to someone who falls asleep while on duty?

# **Risk Tolerant**

Bob reports a slightly greater tendency to be comfortable with more risk. Consider whether this behaviour could impact safety in this job or environment. Also, if the person's risk tolerance is higher consider the possible effect of prolonged fatigue, which could increase the tendency to expediency and ignore caution at times, or project this acceptance of risk to others by ignoring their limitations.

#### Summary of possible indicators

- · tends not to anticipate forward events
- · tends to ignore signs of sleepiness and fatigue
- tends to tolerate being stressed
- doesn't challenge, submits to group pressure
- operates out of habit
- tends not to be mentally alert
- has an incomplete mental picture of situations
- is unlikely to monitor others or the situation
- ignores hazardous potential (i.e. drives in fog)
- inability to challenege, check or test information

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# Possible impacts on performance

People who may be risk tolerant can sometimes be impulsive with an immediate need for gratification and are typically at risk of extending that risk to others if they are in a supervisory role. They tend to avoid making the extra effort required to check or alter what they are doing. The inability to provide the mental effort may also on occasions result in a rebellious and non-compliant person with regard to the rules and protocols of the tasks and workplace. It should be noted that this characteristic is different from the behaviours of the person trained to manage various risks and hazards in their workplace (ie., aviation, public safety roles etc).

# How has this arisen in the past for Bob, how did he respond and what did he learn? Example exploratory questions:

- 1. What do you do to ensure you correctly understand the workplace rules and the limitations of others?
- 2. When you notice others around you getting 'stressed out' what do you do?
- 3. When you notice that you are becoming 'stressed out' at work what do you do?
- 4. How do you balance the need to get things done with following the rules and SOPS in the workplace?
- 5. When you have competing demands to 'get something done on time' but you have to follow a SOP which prevents you from doing that how do you decide what is the 'right thing to do'?
- 6. When you have urgent need to 'get something done immediately' but you have to be mindful of the limitations of others capacity to work safely how do you decide what is the 'right thing to do'?

# **Poorer Safety Attitudes**

Bob's results indicate a complacent attitude and lack of involvement with safety concerns or issues. Bob sees others as being responsible for ensuring safety and for responding to emerging risks. It is strongly recommended that you explore this with Bob to identify the extent that he is likely to avoid responsibility for his own safety and that of others.

# Summary of possible indicators

- more accident prone
- unlikely to monitor the safety of others
- unlikely to double check safety infoormation
- considers that the 'ends' justifies the 'means'
- believes everyone cheats on safety rules
- has unrealistic expectations regarding safety
- frequently reports feeling overstressed
- likely to give in to group pressure
- considers that people injured at work are just less lucky
- overlooking things due to pressure of work
- doesn't believe that paying attention affects safety
- thinks 'you need a real instinct for it to be safe at work'
- has attitude that personal safety is the responsibility of the organisation

# **Possible impacts on performance** People with a 'poor safety attitude' tend to show up as

inattentive and careless with a low appreciation of the risks to them in the workplace. They will justify that view with how ineffective or unworthy everything is of their personal contribution and commitment, Their discontent can come from a more physical source that resembles chronic fatigue or medical conditions where the person is affected by prescribed or illicit drugs. They can sometimes withhold personal effort or contribution due to suppressed frustration with a situation.

# How has this arisen in the past for Bob, how did he respond and what did he learn? Example exploratory questions:

- 1. How often have you found yourself doing whatever is necessary to get the work done no matter how irritating?
- 2. How do you deal with people who push you to do things?
- 3. How do you manage getting things done when it seems impossible to meet both the time and quality standard set for you?
- 4. What sort of situations can you think of where corners can be cut so that you can get things done more quickly?
- 5. Have you found that there were circumstances where you have not reported a safety risk? Why didn't you report it?
- 6. Do you have a special way to deal with your fatigue or in letting your feelings (frustrations) go?

# Fails to Think Ahead

Bob seems to experience some difficulty in maintaining mental alertness, or questioning the available information in a situation. This reduces the likelihood that Bob will think ahead about how a situation might evolve, the possible outcomes that may result and the defensive action that he needs to take to prevent hazards and risks from escalating. Because of this, Bob may be caught unaware by new or emerging hazards and exposed to avoidable risk. It is recommended that Bob's typical behaviour be discussed with him.

# Possible Impacts on performance

- Summary of possible indicatorsfails to anticipate events
  - rarely considers probable outcomes
  - seldom confirms understanding
  - unlikely to detect converging vehicles on roads
  - tendency to go along with 'group think'
  - unlikely to have a full mental picture of surroundings
  - unlikely to be described as 'mentally alert'
  - fails to adequately monitor the capability of an
  - event/machine
  - tendency not to be mentally present and aware
  - unlikely to question information given to them
  - unlikely to want to improve their personal status

People with a poor tendency to look or think ahead typically become unaware of what is going on around them. Their perception and responses to sudden changes or demands risk being reactive, confused, indecisive, inappropriate or too late to apply the correct solution to a problem. In short, everything is a surprise to them (with the typical excuse that 'no one told me!').

At a lesser level, this characteristic may also affect their relationships with others through lack of understanding of the impact of their behaviour and communication. This type of person also tends to fail to ensure they are adequately rested and prepared for their work.

# How has this arisen in the past for Bob, how did he respond and what did he learn? Example exploratory questions:

- 1. How much time would you normally spend familiarising yourself with things like procedures or safety manuals?
- 2. What do you do to stay in touch with the changing circumstances and actions of others around you?
- 3. When are you most relaxed in your job and what is the task you find easiest to do without effort?
- 4. How do you ensure that you stay alert and/or recover your attention so as to be able to do the job to the required standard?
- 5. What do you do if you notice that it is hard for you to maintain full awareness of your surroundings?
- 6. \*\*\*How hard do you find it to anticipate guess what someone will do after speaking to them. How do you rate yourself?
- 7. What specifically do you do to prevent yourself from 'zoning out' when faced with boring tasks?
- 8. What would you say the key attribute of 'Sherlock Holmes' is in those stories about the mythical investigator?

#### SELF-REGULATION

The capacity to maintain and recover attention is critical to safety and depends on adequate self-regulation. Poor attention and task performance can result from diminished presence of mind due to fixation and preoccupation or from a wandering mind due to fatigue a medical context, inadequate or disrupted personal habits. A lesser state may also result in an inability to switch rapidly between tasks and manage distractions. The component measures in this factor identify the particular vulnerability for this person. The factor measures present mental state enabling an external awareness, characteristic speed of recovery and fatigue management.

#### **Manages Fatigue**

#### **Contribution to Safety & Productivity**

Extent of the accumulated fatigue on personal performance with the potential for breakdown in safe behaviour and vigilance. Considers fatigue inducing behaviours which may prevent good recovery in sleep, otherwise necessary for the maintenance of a positive alert mental state, so as to be able to pay attention to events and surroundings, control emotions, reduce errors of judgement or inadvertent rule breaking.

#### Effect on Performance (Rated as Slightly Below Average in range of 51-90)

Bob's further results in this area tended to confirm the possibility of breakdown due to cumulative fatigue effects on the person which could impact performance suggesting a lesser degree of self management sleep, diet, exercise and relaxation habits, which could be improved to maintain or improve on the job performance. Bob may increasingly show decreases in attention, concentration, and some increase in emotional reactivity.

#### **Mental Alertness**

#### **Contribution to Safety & Productivity**

The cognitive capacity scale measures the individuals prevalence of failure in mental functioning as evidenced by every day slips in perception, memory and physical functions. The person subject to cognitive failure shows up as easily distracted with poor short term memory and a tendency to clumsy uncoordinated behaviour. Cognitive failure can be seen to make the person vulnerable to errors of ommission and through frustration to expedient behaviour resulting in safety violations.

#### **Positive Recovery Skills**

#### Contribution to Safety & Productivity

Involves the stability of mood and affect of the person as it impacts safety oriented behaviour by way of their diligence, alertness and situational awareness, energy and responsiveness in addition to the adequacy of interaction with others.

#### Effect on Performance

(Rated as Slightly Below Average in range of 51-90)

Bob reports a significant level of stress, operating at the slightly below average level with respect to full and alert functioning as evidenced by every day slips in perception, memory and physical functions. Bob will likely show up as more easily distracted, displaying poor short term memory and a tendency to clumsy uncoordinated behaviour increasing his vulnerability to errors of omission and through frustration to expediency and safety violations.

#### Effect on Performance

(Rated as Slightly Below Average in range of 51-90)

• Bob's coping skills appear to be very marginal at a slightly below average level suggesting a tendency to some emotional instability and possibly signs of anxiety or even depression when under stress. Typical behaviour of individuals with lesser coping skills is a loss of a sense of humour, sensitivity and tendency to project their dissatisfaction by being critical of others and to complain about the things that prevent them from full performance. A difficulty in relaxing and possibly slower recovery when under load would likely show up as growing fatigue affecting both vigilance and responsiveness.

#### FUNCTIONAL ABILITIES

The functional group of items are cognitive abilities that support the primary or most important attention measures in the test and demonstrate an unencumbered mind capable of mental flexibility, avoidance of fixation and relatively sound logic in decision making. A lesser result is generally experienced when the person is subject to an overwhelming emotional, medical or fatigue experience blocking adequate perception and resultant decision making.

#### **Perception & Projection**

#### **Contribution to Safety & Productivity**

Perceptual functioning involves the mental and visual ability to discern the outcomes in both practical and abstract contexts. The level of perceptual functioning indicates the person's capacity for accurate performance in identifying and projecting the hazards in any context.

#### Effect on Performance (Rated as Above Average in range of 111-200)

Bob indicates an above average ability to project outcomes and discern a logical sequence in both practical and abstract tasks. Contributing significantly to Bob's safety mindfulness and capacity to avoid risk.

#### Working Memory

# Contribution to Safety & Productivity

Considers the ability to maintain a level of memory functioning involving short term situationally specific or episodic retrieval, indicating the timely capacity to retrieve and manipulate interrupted processes and data necessary for the safe execution of a task.

#### Effect on Performance (Rated as Above Average in range of 101-300)

Bob's results indicated an average to well above average ability to maintain a level of memory functioning involving short term situationally specific or episodic retrieval, indicating a competent capacity to resume interrupted intentions, retrieve and manipulate data necessary for the safe execution of a task.

#### THREAT AND ERROR MANAGEMENT SKILLS

The 'TEM' measure indicates the extent to which the respondent is forward looking, aware of issues and vigilant with respect to self and others. A good result requires an understanding of risk and an appreciation of the limits of others together with the development of self protective habits gained from experience to counter normal human fallibility. A lesser result with respect to the measures would tend to indicate a lack of anticipation and a tendency to reactive management.

#### **Anticipates & Defends**

#### **Contribution to Safety & Productivity**

Defensive safety habits refers to the person's perception and understanding of themselves and the environment. Involves monitoring developments resources, weather, fatigue, personality conflicts, etc.. Anticipates required actions. Asks the right questions. Tests assumptions, confirms understanding. Monitors workload distribution. Reports fatigue, stress and overload in self and others. Generally, has 'presence of mind' such that most events seem to be expected Effect on Performance (Rated as Slightly Below Average in range of 51-90)

Bob's results indicate a below average ability to maintain situational awareness by monitoring developments, to anticipate required actions, ask the right questions, check assumptions and confirm understanding. Monitor workload distribution, report fatigue, stress and overload in self and others.

#### **Understands Human Error**

#### **Contribution to Safety & Productivity**

The Understands Human Errors scale identifies the extent of awareness of the way that various human factors are able to impact an individuals perception, memory and coordination and the inevitability of error.

# Effect on Performance

(Rated as Slightly Below Average in range of 51-90)

Bob's results on the extent of appreciation of the impact that various disruptive human factors can have on full and alert functioning was at the slightly below average level suggesting a need for greater insight in planning for potential threats which may turn an actual hazard into a danger.

# TEAM RESOURCES MANAGEMENT SKILLS

The team management skills measure the key supervisory attributes of the respondent and their ability to achieve a safety cohesive team by operating out of concern for others. The factor measures the inclination and awareness to anticipate, identify and present according to the needs of others. A lesser result on this dimension would tend to result in 'light switch' compliance and poorer overall cooperation by members.

#### **Emotional Intelligence**

# **Contribution to Safety & Productivity**

The emotional intelligence scale measures the person's capacity to perceive and appraise the emotions of self and others, the ability to manage those to achieve interpersonal objectives and utilise these for more effective planning, creativity, growth and significantly, the avoidance of non-productive conflict to improve safety at work.

#### Effect on Performance

(Rated as Slightly Below Average in range of 51-90)

Bob responses, relative to competent managers, indicate a lesser and slightly below average awareness of others feelings and sensitivity to their needs. Bob may have difficulty engaging them and in managing conflict and will likely want to avoid, withdraw or attempt to dominate them. Furthermore, Bob indicates a lesser capacity to perceive and understand the way others feel and their motivation, so as to or to more effectively plan and direct their safety at work.

# **Participative Style**

#### Contribution to Safety & Productivity

Ability to develop cooperation and teamwork, seek and encourage participation, deal equitably and warmly with others, keeps people informed

#### Effect on Performance

(Rated as Slightly Below Average in range of 51-90)

Bob appears to indicate a lesser ability, relative to competent managers, to work cooperatively in a team, seek and encourage participation, deal equitably and warmly with others

# **Team Safety Orientation**

# **Contribution to Safety & Productivity**

Addresses the readiness and capacity for the individual to respect and care for the safety of other crew members and nearby aircraft, display patience and encourage safety. Effect on Performance

(Rated as Slightly Below Average in range of 51-90)

Bob seems to have a below average degree of positive-ness in attitude to others, with a moderate or inconsistent level of interest in their safety needs and with a slightly casual or reluctant respect and care for the other members of the team, would be unlikely to display patience and encourage safety by example.

# SAFETY PERSPECTIVE

The safety perspective factor measures the respondent's proactive mindset and sense of personal responsibility in managing safety together with the tendency to avoid circumstances that are beyond personal limitations. A lesser result on the measures would tend to impulsive and potentially rash decisions and an avoidance of responsibility for safety. The factor is an important dimension of safety compliance.

#### **Responsible for Safety**

# Contribution to Safety & Productivity

Involves the perception and belief the individual has in their ability to guide and influence what happens to them and others in the context of safety. Behaviour range is from the passive to the proactive with regards to safety.

#### Effect on Performance

(Rated as Slightly Below Average in range of 51-90)

Bob reports a slightly below average level of belief in his ability to control or influence what happens to him and others and would generally tend to be passive and reactive with regards to own or others safety.

#### **Risk Sensitivity**

#### **Contribution to Safety & Productivity**

Considers the tendency for the individual to purposefully seek out, respond to or avoid situations that are uncontrollable, require considerable skill, represent 'quick and dirty' approach to work or may result in punitive action. Higher scorers indicate the capacity to observe the rules, follow procedures and maintain a consistent degree of integrity in their approach to the work.

#### Effect on Performance

(Rated as Slightly Below Average in range of 51-90)

Bob reports a slightly below average tendency avoid risk with a tendency to respond to personally challenging situations that may be uncontrollable or unsafe. Bob may occasionally tend to ignore the rules and procedures or direct instructions when motivated by a challenge.

#### Safety Conscientiousness

# **Contribution to Safety & Productivity**

Involves the extent to which the individual is likely to display diligent and conscientious behaviour, avoiding rule breaking, expediency, group pressure and careless acceptance of others work to ensure consistently safe outcomes for themselves.

#### Effect on Performance

(Rated as Slightly Below Average in range of 51-90)

Bob indicates a slightly below average capacity for diligent and conscientious behaviour, to avoid rule breaking, expediency, group pressure and careless acceptance of others work, as a way to ensure consistently safe outcomes.



# **Reports on individuals and groups**

Short reports	Summary of results, graphical comparison against criteria, strengths and weaknesses, test or survey structure. Suitable for advisory purposes.
Full Reports	Extended results including summary, graphical comparison against criteria, strengths and weaknesses, assisted interview guide with prompts and key behaviours, full scale performance results, test or survey structure.
Training needs	Summary key training needs, graphical comparison of results against benchmark, sample and population means. Results narrative and advisory.
Group reports	Aggregated results showing description and result comparison against sample, population and benchmark criteria.
Ranked tables	Group table of ranked raw scores and index showing percentage achieved criteria for each scale.

# **Analytics Reports on test/survey administration**

	Full descriptive stats including means, deviations, error, and item performance by time.
Graphical results	Line graph of result against criteria, Graph of Z scores all scales.
Comparison of groups	Comparison of selected groups on selected criteria on line graph of results
Correlations of results	Table of inter-correlations showing results probability and certainty.

# **Pricing by report set:**

- Standard Set: includes The test, Short report, Ranked comparison tables, Verification certificate.
- Recruiter Set: includes the standard options plus the Full interviewing report, Training needs.
- Administrators' Set: performance report includes Group narrative reports, Full graphical and tabular analysis outputs with correlation tables.