







## **Attentional Focus**

The ability of an individual to keep their attention focused on a task has also been demonstrated to correlate with occupational safety incident involvement. Hansen (1989) illustrated that distractibility was a direct predictor of workplace incidents. It has also been shown that those who are prone to more cognitive failures (mistakes or errors that an individual makes during a task that he or she would normally be able to carry out) are more likely to be involved in safety incidents, especially in people with lower levels of conscientiousness (Wallace & Vodanovich, 2003). Research in the railway industry illustrated that the most influential factor leading to incidents was inattention (Edkins & Polluck, 1997).

## **Harm Avoidance**

Research has identified that the ability to avoid and manage harmful energies predicts workplace safety incidents. Paul and Maiti (2007) found that increased risk-taking behaviors led to higher numbers of injuries as well as negative emotionality and job dissatisfaction in underground coal miners. Ulleberg and Rundmo (2003) revealed that thrill-seeking individuals perceived risk to be lower, had more negative safety attitudes, and participated in more risky behaviors.

## **Operating Care**

Research has shown that the acknowledgement of proper and careful use of equipment and procedures is an influential factor in predicting workplace safety incidents. Feyer, Williamson, & Cairns (1997) found that the majority of industrial fatalities in their study involved unsafe operating procedures. It was found that accidents involving misuse of equipment were more common than those involving the misuse of personal protective equipment.

## **Personal Work Standards**

The Personal Work Standards scale can be viewed as a measure of conscientious. The factor of conscientiousness has been studied extensively with regard to occupational safety. Conscientiousness relates to an individual's tendency to strive for achievement, seek improvement, and be deliberate and reliable. A statistical procedure combining the results of many studies (meta-analysis) illustrated that low conscientiousness predicted accident involvement (Clarke & Robertson, 2005). Arthur and Graziano (2005) discovered that those with low conscientiousness were involved in more traffic accidents and also had more traffic violations.



## **Administration & Scoring**

The Predictor is largely self-administered online through a web application, and can be completed individually or in groups. The administrator should ensure that the assessment environment is relatively free from distractions, is quiet, and well lit. It is important to create an environment that makes the individuals taking the Predictor as comfortable as possible. A reading comprehension level at the eighth grade level is sufficient. The test is 109 questions long and, while it is not timed, most responses are completed in less than 30 minutes. Those who take longer may be encouraged to work more rapidly and not study the items at length. Responses are downloaded on the secure web server and scored. The responses are also run through a validity algorithm to determine the presence of any motivational distortion.

No rigorous controls are required to establish dependable, reliable results. The Predictor has been used in a variety of conditions, including formal testing, individual administrations, and take home administrations. While a standard, supervised administration is ideal, the reliability and validity of individuals' results have not been negatively affected through less stringent administration conditions.

## Interpreting the WorkSafe Predictor

The WorkSafe Predictor is designed for testing adults in business and industrial settings where safety is important. No industry specific language or technical jargon is used so the WorkSafe Predictor can be administered in any industry and with any position. The most popular application for the Predictor is in personnel selection. It will help determine what aspect of the candidate's behavior contributes to higher risk, providing opportunities to address those areas hindering safety. When administered to current employees, the WorkSafe Predictor will help determine the focus of training and development to enhance a positive safety culture.

After the responses have been scored and the reports have been generated, the results can be interpreted. This chapter outlines the steps for appropriately interpreting WorkSafe Predictor results, and provides in-depth information on the meaning of the 8 scales.

### Steps for Interpreting the WorkSafe Predictor

The following four steps outline the recommended process for interpreting an individual's results.

**Step One: Assess the validity of the Predictor results.** The validity of the WorkSafe Predictor results must be evaluated before proceeding with the interpretation of an individual's profile. Assessing the validity involves examining the Profile Validity Score. This is presented on the first page of the WorkSafe Predictor Profile. The Profile Validity Score assesses the extent to which the questionnaire was answered accurately rather than an overtly positive or unusual way. Persons with low Validity scores respond in an unrealistically positive way, or obtained a profile which does not fit normal patterns. Persons with high Validity scores answered the questions in a candid and realistic way. A low Validity score indicates a high level of uncertainty in the accuracy of the profile. Profiles with many high or low scale scores should be interpreted with caution.

**Step Two: Interpret the Scale Scores.** The next level of interpretation is at the scale level which pinpoints specific strengths, challenges, preferences, and tendencies. This allows you to identify differences among people that play an important role in effectively matching candidates to a job, or identifying areas where attention can be focused for training and development. Individuals' highest and lowest scale scores are important to examine closely since their pattern closely relates to the work tasks they will be successful at, the work environment in which they will perform effectively, and the types of tasks they will enjoy.

If you are selecting personnel and have developed benchmarks for the position, it is appropriate to compare the candidate's scores with the benchmarks at this stage. Differences between the individual and the job requirements can be explored in Step Three when conducting interviews or utilizing other assessments. Specific interpretation for each of the 8 scales can be found later in this chapter.





- Persons with high Harm Avoidance will either avoid exposing themselves to hazardous energies, or when they do expose themselves, will minimize risk through the use of safety procedures and precautions.
- Persons with low Harm Avoidance will expose themselves to harmful energies without seeing the risks, or without utilizing safety procedures or precautions to the extent possible.

### **Operating Care**

Assesses the extent to which an individual is at ease with operating equipment and vehicles safely, follows operating procedures and the overall level of regard for proper operation.

- Persons with high Operating Care operate in a safe, focused and diligent manner, respecting equipment limitations, and having a “sense” of the machine.
- Persons with low Operating Care are less concerned with safe operation and lack the same vigilance and ease in their operating actions.

### **Personal Work Standards**

Assesses the extent to which an individual will focus on work tasks and their successful completion to a level of excellence.

- Persons with high Personal Work Standards will strive to improve their work, attend to details and ensure successful completion of tasks to a satisfactory standard.
- Persons with low Personal Work Standards will overlook personal learning or growth opportunities and show little concern for improving work outcomes, miss details of the work activity and complete work tasks in the quickest and easiest way.

### **Responsible Care**

Assesses the extent to which an individual actively attends to the safety and well-being of co-workers.

- Persons with high Responsible Care scores will look out for the personal well-being of co-workers, anticipating and acting to remove potential hazards or harmful conditions, or to address behaviours such as unsafe acts.
- Persons with low Responsible Care scores will ignore hazards, unsafe conditions and actions that have the potential to harm co-workers.

## Safety Ownership

Assesses the extent to which an individual assumes personal responsibility for their own safety, irrespective of the adequacy of safety systems and procedures or the extent of potentially hazardous energies in the workplace.

- Persons with high Safety Ownership see their safety as a consequence of their own initiative and action.
- Persons with low Safety Ownership place responsibility and control over safety outside themselves, and hence will be inclined to blame incidents on luck or other factors. This can result in exposure to situations that are harmful.

## Stress Response

Assesses the extent to which an individual responds constructively to internal stress or stressful situations.

- Persons with high Stress Response will recognize stressful situations and stress within themselves, but will keep their emotions in check and act effectively and deliberately.
- Persons with low Stress Response will be affected by situational stressors and will allow personal stress to interfere with effective action, thus exposing themselves to potential harm.

## Safety Trust

**WPT** sense of the degree of importance placed on safety by past and present employers.

- Persons with high Safety Trust bring quality safety awareness, attitude and knowledge from ~~previous employers~~
- Persons with low Safety Trust may bring cynical safety attitudes or poor safety practices from previous employers to their present workplace; in such cases strong safety orientation will be needed.

## Validity

Assesses the extent to which the individual answered the questions accurately rather than an overly positive or unusual way.

- Persons with a low Validity score answered the questions in an unrealistically positive way, or obtained a profile which does not fit normal patterns.
- Persons with a high Validity score answered the questions in a candid and realistic way.

## Development and Norming of the WorkSafe Predictor

### Scale development and item writing

The WorkSafe Predictor is a result of a number of efforts over a period of 10 years. This version is the third iteration of the assessment. The previous two assessments were called the Industrial Safety Behavior Questionnaire and the Safety Behaviour Index. The development of these two assessments formed the basis for the WorkSafe Predictor. The Predictor uses eight scales. To construct a measure of the eight scales, a thorough review was conducted of research studies and current personality measures to develop objective, operational definitions for each trait. After having created definitions for each scale, items that provided behavioural evidence for the scales were developed. The items were written according to the following rules:

1. Items should relate directly to work safety behaviour. The situation presented in the item needed to examine preferences and motivations for different types of work and work environments.
2. Items were to be written in the first person (e.g. "I am... ", "At work I... ", "For me... "). Since the Predictor is a self-report measure, it was necessary to write items in the first person.
3. Items should be short, direct, and easy to understand.
4. A six-point Likert scale was developed to allow individuals to register the extent of their agreement or disagreement with each statement. The respondents could indicate their preferences by choosing one of the six options for each item.

For example:

*In places I have worked, when it was busy, safety suffered.*

Strongly Disagree   Moderately Disagree   Slightly Disagree   Slightly Agree   Moderately Agree   Strongly Agree

The assessment has undergone a number of iterations and modifications which have resulted in the newest 109 item version of the instrument.

## **Norming of the WorkSafe Predictor**

Norming is a key step in test development. The norms set the baseline which all test results are measured against, which allows the comparison of different individual's scores. Norms identify below average, average, and above average performance on the test, and help the test user appropriately interpret a person's results and make decisions. The more people included in the norm sample helps ensure that the test norms represent the actual distribution of work safety behaviours of the people in the population. This in turn allows the test results to be more accurate and informative when comparing different individuals.

The WorkSafe Predictor was standardized on a large sample of 1967 people, 1641 males and 326 females. The majority of the sample were applicants for occupations in resource, manufacturing, and extraction industries. They represent all levels of jobs: entry level job seekers, operators, administrative personnel, trades persons, engineers, human resource staff, business managers and supervisors.

## **Sten Scores**

A person's results on the Predictor are reported in a standard score format known as Sten Scores. Standard scores are converted raw scores that help with the interpretation test results by allowing the comparison of an individual's results with the norm group. Standard scores also help compare a person's primary scale scores against each other. This allows us, for example, to determine if the person scores higher on Attentional Focus than Stress Response. There are many different types of standard scores. Sten scores are one of the most popular types of standard scores when reporting personality assessment results. Sten scores range from 1 to 10, have a Mean of 5.5, and a Standard Deviation of 2. This means, that an individual with a Sten score of 5.5 falls exactly on the average score of the norm population. As a result, 50 percent of the norm sample would score above and below the individual.

## **Means and Standard Deviations**

Table 2 provides a detailed description of the Predictor raw scale scores for the sample. The means and standard deviations shown provide the norms which individuals who complete the Predictor are compared against. The mean raw score for each scale represents the "average" score of people in North America. The standard deviation indicates the spread of scores found among people in the normative sample. Approximately 68% of the population will obtain scores within one standard deviation above and below the mean, while 95% of the population will score within two standard deviations of the mean.

## Sample characteristics

This technical supplement contains normative data for the WorkSafe Predictor, derived from a reference sample of job applicants. The WorkSafe Predictor is a 109 item questionnaire created to assess patterns of thinking and acting that predict safe behavior and the likelihood of remaining free from workplace safety incidents. The reference sample comprised 1967 job applicants across a large number of North American companies. The sample consisted of 1641 males and 326 females.

**Table 2: Applicant performance on the WorkSafe Predictor (n=1967)**

	Total Sample (n=1967)		Males (n=1641)		Females (n=326)	
	Mean	SD	Mean	SD	Mean	SD
<b>Attentional Focus</b>	50.13	7.94	50.06	7.99	50.53	7.68
<b>Harm Avoidance</b>	62.39	9.15	62.28	9.25	62.92	8.64
<b>Operating Care</b>	71.82	7.53	71.98	7.60	71.03	7.14
<b>Personal Work Standards</b>	53.12	6.34	52.96	6.40	53.95	5.97
<b>Responsible Care</b>	52.67	6.29	52.69	6.35	52.62	5.97
<b>Safety Ownership</b>	60.48	6.95	60.42	7.04	60.79	6.51
<b>Stress Response</b>	49.71	8.98	49.66	9.03	49.96	8.72
<b>Safety Trust</b>	70.45	12.27	70.64	12.16	69.46	12.81
<b>Profile Validity</b>	26.37	7.10	26.33	7.18	26.58	6.68
<b>Overall Score</b>	377.85	38.35	377.63	38.90	378.97	35.52

## Gender Differences

Since the WorkSafe Predictor is used to compare people, including both males and females, it is important to have an understanding of the gender differences found on the 8 scales. A number of minor gender effects were discovered when comparing the mean scores of males and females. While most of the differences are quite small in magnitude, some are statistically significant. In general, females tended to receive higher scores on Personal Work Standards. Males tended to receive higher scores on Safety Trust. Since the differences between the scales were minimal they should not influence test interpretation.

## Ethnic Differences

The norm sample for the WorkSafe Predictor contains a significant number of minorities, allowing for the examination of ethnic differences. A test which finds significantly large differences between members of minority groups and a majority group can result in adverse impact. These types of differences are commonly when using cognitive ability tests. However these variations tend to be less frequent and less pronounced for measures of behaviour or personality such as the WorkSafe Predictor. Table 3 lists the mean score for the WorkSafe Predictor dimensions for a group of recognized ethnic minorities and a Caucasian group. T-tests found significant differences on all scales except Harm

Avoidance and Operating Care. In all cases (except Safety Ownership) the minority group scored higher than the majority group. The assessment shows no adverse impact on minority populations. While minor differences can be observed between the groups, their effect on test interpretation is minimal.

**Table 3: Applicant performance on the WorkSafe Predictor by Ethnicity (n=1967)**

	Total Sample (n=1967)		Caucasian (n=1780)		Minority (n=187)	
	Mean	SD	Mean	SD	Mean	SD
<b>Attentional Focus</b>	50.13	7.86	49.89	7.99	52.66	8.25
<b>Harm Avoidance</b>	62.39	9.15	62.01	9.12	65.94	8.12
<b>Operating Care</b>	71.82	7.53	71.77	7.49	72.36	7.92
<b>Personal Work Standards</b>	53.12	6.34	52.89	6.30	55.32	6.37
<b>Responsible Care</b>	52.67	6.29	52.56	6.20	53.79	6.94
<b>Safety Ownership</b>	60.48	6.95	60.63	6.88	59.00	7.48
<b>Stress Response</b>	49.71	8.98	49.60	8.91	50.69	9.55
<b>Safety Trust</b>	70.45	12.27	69.87	12.16	75.95	11.96
<b>Overall Score</b>	377.85	38.35	376.93	38.10	386.65	39.74

## Reliability

Reliability is concerned with the consistency of test scores, and how free test results are from external, confounding influences. The higher the reliability of a test, the more likely it is consistently measuring differences between people. More reliable tests provide results that remain unaffected by irrelevant variations, or what is commonly called random errors. Reliability is measured using correlation coefficients. A reliability coefficient is denoted by the letter “r”, and is expressed as a number ranging between 0 and 1.00 with r=0 indicating no reliability, and r=1.00 indicating perfect reliability.

It is important to recognize that tests are never 100% accurate, so you will not find a test with a correlation coefficient of r=1.00. In general you will see the reliability of a test expressed as a decimal, for example, r=.80 or r=.93. There are a number of reasons and/or conditions that lead to unreliable test results. Some of the possible reasons include the following.

1. Candidate related: Test performance can be influenced by a person’s psychological or physical state at the time of testing. For example, differing levels of anxiety, fatigue, or motivation may affect the individual’s test results.
2. Test-related: Item design, instructions, examples and the design of the response procedure can influence an individual’s test results. For example, confusing items or complicated instructions which make understanding the test difficult can negatively affect a person’s results.

3. Procedural: Differences in the testing environment, such as room temperature, lighting, noise, or even the test administrator and scoring procedures can influence an individual’s test performance.

These three factors are sources of chance or random measurement error in the assessment process. If there were no random errors of measurement, the individual would get the same test score, their “true” score, each time. The degree to which test scores are unaffected by measurement errors is an indication of the reliability of the test.

One of the main approaches used to assess reliability is through measures of internal consistency. A sophisticated form of internal consistency reliability is Cronbach’s alpha. It effectively splits the test items in every possible way and computes the average of all combinations. Consistency should be achieved such that all the items are measuring the same thing to the same degree, and, therefore, the items for each test scale should have a high degree of correlation. Most professionals agree that test scales with correlation coefficients above .70 are useful for most applications. The internal consistency reliability coefficients for each of the WorkSafe Predictor scales are shown in Table 4. As shown in the table, the reliability coefficients range from .70 to .87 for the whole sample, for males and females and for groups with different educational levels. This exceeds the .70 level for every group, indicating the consistency of the Predictor test scores is high. The strength of the reliability coefficients indicates that the Predictor is relatively free from external errors that could negatively impact the measurement of safety behaviour.

**Table 4: Reliability Coefficients for various samples of the WorkSafe Predictor**

		<b>Total Sample (n=1967)</b>	<b>Males (n=1641)</b>	<b>Females (n=326)</b>
	Number of Items	KR-20	KR-20	KR-20
<b>Attentional Focus</b>	12	0.78	0.78	0.76
<b>Harm Avoidance</b>	13	0.82	0.82	0.82
<b>Operating Care</b>	15	0.71	0.72	0.69
<b>Personal Work Standards</b>	12	0.70	0.70	0.70
<b>Responsible Care</b>	12	0.70	0.70	0.70
<b>Safety Ownership</b>	13	0.72	0.72	0.70
<b>Stress Response</b>	14	0.80	0.80	0.79
<b>Safety Trust</b>	15	0.90	0.90	0.89
<b>Profile Validity</b>	8	0.82	0.83	0.81
<b>Overall Score</b>	94	0.93	0.93	0.92

The correlations in Table 5 show the relationships between the 10 WorkSafe Predictor scales. Reviewing the table shows there are significant relationships among the scales. Results indicate that the content scales are moderately and positively correlated with one another, and strongly correlated with the Overall Score as would be expected.

**Table 5: Correlation Coefficients for WorkSafe Predictor Scales (n=1967)**

	<b>2.00</b>	<b>3.00</b>	<b>4.00</b>	<b>5.00</b>	<b>6.00</b>	<b>7.00</b>	<b>8.00</b>	<b>9.00</b>	<b>10.00</b>
<b>1</b> Attentional Focus	0.53	0.55	0.67	0.48	0.57	0.63	0.37	0.51	0.83
<b>2</b> Harm Avoidance		0.62	0.63	0.46	0.50	0.33	0.44	0.35	0.76
<b>3</b> Operating Care			0.59	0.46	0.55	0.38	0.37	0.30	0.77
<b>4</b> Personal Work Standards				0.54	0.60	0.53	0.42	0.48	0.83
<b>5</b> Responsible Care					0.57	0.55	0.31	0.15	0.72
<b>6</b> Safety Ownership						0.57	0.29	0.20	0.79
<b>7</b> Stress Response							0.26	0.40	0.74
<b>8</b> Safety Trust								0.37	0.46
<b>9</b> Profile Validity									0.45
<b>10</b> Overall Score									



## **Validity of the WorkSafe Predictor Assessment**

The validity of an assessment refers to the accuracy of the inferences that may be made based on the results of the assessment. An instrument is said to be valid when it measures what it has been designed to measure (Ghiselli, Campbell, & Zedeck, 1981; Murphy & Davidshofer, 2005). Additionally, a valid assessment maintains the same relationships with other assessments over time. Validity of personality assessments is often established through construct validity by showing that results of the assessment relate in a predictable manner to results of other similar measures they should be related to (known as convergent validity) and are not related to results of measures they should not be related to (known as divergent validity). Convergent validity can be demonstrated when results of an assessment are related to results of other similar measures, observations, or other information that assesses the same or a similar concept. Similarly, divergent validity can be demonstrated when results of an assessment fail to relate to other measures, observations, or information they should not be related to.

## **Correlations with Other Personality Assessments**

To further demonstrate convergent and divergent validity of the WorkSafe Predictor the assessment was correlated with scales of several other assessments, namely the Employment Values Inventory, the Occupational Type Profile, and the Occupational Relationships Profile. Descriptions of the relationships between the WorkSafe Predictor assessment and the other assessments follow.

## The Employment Values Inventory

The Employment Values Inventory (EVI) contains 14 work related values that a person holds. The EVI scales are divided into six categories, and are described by category below. Correlations between the two instruments are displayed in Table 6.

**Table 6: Employment Values Inventory Scales**

<b>JOB VALUES</b>	
<b>Work Ethic</b>	A belief in the virtue of hard work
<b>Task Orientation</b>	Value given to the needs of the task itself
<b>Need to Achieve</b>	The value of drive, determination and ambition
<b>PEOPLE VALUES</b>	
<b>Social Outgoingness</b>	Placing a high value on being with others in a social environment
<b>Inclusion</b>	Values placed on being a part of close knit team and to make the team work as harmoniously as possible
<b>MANAGEMENT VALUES</b>	
<b>Responsibility</b>	Value taking on many responsibilities in their work
<b>Leadership</b>	Value taking charge of people and events in a dominant fashion
<b>PROFESSIONAL VALUES</b>	
<b>Innovation</b>	Value tasks that allow for experimentation and creativity
<b>Intellectual Stimulus</b>	Value using their intellect beyond the ordinary demands of daily living
<b>Risk-taking</b>	Value taking chances that seem to have excitement or an element of danger
<b>ORGANISATION VALUES</b>	
<b>Stability</b>	Value place on having a generally stable workplace
<b>Structure</b>	Value following rules and regulations
<b>Status</b>	Value work that allows them to feel, important and respected
<b>PERSONAL VALUES</b>	
<b>Training</b>	Values gaining knowledge from training on the job

(Personality Course Manual, Selby MillSmith, 2001)

**Table 7: Work Values and WorkSafe Predictor Correlations (n=179)**

<b>JOB VALUES</b>	<b>Attentional</b>	<b>Standards</b>	<b>Responsible</b>	<b>Ownership</b>	<b>Trust</b>	<b>Stress</b>	<b>Harm</b>	<b>Care</b>	<b>Total</b>
Ethic	0.19	<b>0.20</b>	0.15	<b>0.29</b>	-0.04	0.14	0.09	<b>0.33</b>	<b>0.26</b>
Task Orientation	0.02	0.01	-0.16	0.02	-0.08	-0.16	0.03	0.06	-0.03
Need to Achieve	0.11	0.09	0.08	<b>0.21</b>	0.03	0.06	0.06	0.14	0.14
<b>PEOPLE VALUES</b>									
Social Outgoingness	<b>0.20</b>	0.17	<b>0.26</b>	0.12	<b>0.21</b>	<b>0.22</b>	<b>0.35</b>	<b>0.25</b>	<b>0.30</b>
Inclusion	0.14	0.16	0.18	0.09	<b>0.23</b>	0.11	<b>0.28</b>	0.17	<b>0.21</b>
<b>MANAGEMENT VALUES</b>									
Responsibility	<b>0.26</b>	<b>0.27</b>	<b>0.27</b>	<b>0.35</b>	0.16	<b>0.21</b>	<b>0.24</b>	<b>0.45</b>	<b>0.38</b>
Leadership	-0.07	-0.02	-0.01	0.16	0.01	-0.06	0.04	0.04	0.01
<b>PROFESSIONAL VALUES</b>									
Innovation	0.10	0.09	0.09	0.05	0.11	0.08	0.08	0.11	0.11
Intellectual Stimulus	<b>0.25</b>	0.10	0.11	0.14	0.14	0.17	0.12	<b>0.23</b>	<b>0.22</b>
Risk-taking	-0.12	-0.09	-0.04	0.06	-0.13	-0.01	<b>-0.25</b>	-0.05	-0.10
<b>ORGANISATION VALUES</b>									
Stability	-0.03	-0.08	-0.09	-0.07	0.09	<b>-0.21</b>	0.16	0.04	-0.05
Structure	0.09	0.05	-0.02	-0.06	0.15	-0.02	<b>0.26</b>	0.07	0.07
Status	-0.02	-0.01	-0.13	0.01	-0.01	-0.08	0.03	-0.04	-0.04
<b>PERSONAL VALUES</b>									
Training	0.14	0.08	0.04	0.01	0.06	0.02	0.09	0.11	0.09

**Bold correlations are significant at the 0.01 level**

## The Occupational Relationships Profile

The Occupational Relationships Profile (ORP) contains 6 scales that relate to the quality of social interactions and personal relationships that occur in a typical work environment.. The OTP scales are described below. Correlations between the two instruments are displayed in Table 8.

**Table 8: The Scales of the Occupational Relationships Profile**

Scale	Description Of Scale First Six Scales	Theory Used To Develop Scale
Contact At Work	The degree to which an individual makes themselves known to others and involve themselves in the social environment	Schutz
Membership	The degree to which an individual wants others to involve them in the social environment	Schutz
Power	The degree of influence and responsibility an individual displays in their relationships with others	Schutz
Responsiveness	The degree to which an individual wants others to display influence and responsibility over them	Schutz
Openness	The degree of intimacy, affection and trust that an individual shares with others	Schutz
Shyness	The degree of intimacy, affection and trust that an individual wishes to receive from others	Schutz

Scale	Description Of Composite and Leadership Scales	Theory Used To Develop Scale
Sociability	A general measure of sociability	Schutz
Proactivity	The general level of confidence an individual displays in their dealings with others	Schutz

(Personality Course Manual, Selby MillSmith, 2001)

**Table 9: Occupational Relationships Profile and WorkSafe Predictor Correlations (n=179)**

CORE SCALES	Attentional	Standards	Responsible	Ownership	Trust	Stress	Harm	Care	Total
Contact	0.08	0.07	<b>0.27</b>	-0.01	<b>0.20</b>	0.16	0.14	0.10	0.15
Membership	0.04	-0.05	0.15	0.06	0.03	0.09	0.07	0.13	0.09
Power	-0.08	-0.07	-0.04	0.04	-0.03	-0.11	-0.14	-0.03	-0.08
Responsiveness	-0.19	-0.16	0.04	-0.10	0.04	-0.05	-0.06	-0.03	-0.11
Openness	0.05	-0.01	<b>0.26</b>	0.03	0.08	0.10	0.10	0.16	0.13
Shyness	0.07	0.00	<b>0.27</b>	0.08	-0.03	0.14	0.09	<b>0.21</b>	0.16
<b>COMPOSITE SCALES</b>									
Sociability	-0.01	-0.06	<b>0.20</b>	0.04	0.05	0.06	0.03	0.12	0.07
Proactivity	0.03	0.09	-0.04	0.01	0.07	-0.08	-0.06	-0.08	-0.03

**Bold correlations are significant at the 0.01 level**

### The Occupational Type Profile

The Occupational Relationships Profile (OTP) is based on Jung's theory of psychological type. It contains 4 scales – Extraversion-Introversion or EI, Sensing-Intuition or SN, Thinking-Feeling or TF and Judgment-Perception or JP. Correlations between the two instruments are displayed in Table 10.

**Table 10: Occupational Type Profile and WorkSafe Predictor Correlations (n=179)**

	Attentional	Standards	Responsible	Ownership	Trust	Stress	Harm	Care	Total
EI	<b>-0.30</b>	-0.19	<b>-0.30</b>	<b>-0.28</b>	-0.09	<b>-0.31</b>	-0.09	<b>-0.22</b>	<b>-0.32</b>
SN	0.08	0.10	0.00	0.05	-0.01	0.08	-0.06	-0.04	0.04
TF	0.02	0.08	0.13	-0.07	0.00	0.03	0.12	0.11	0.08
JP	<b>-0.41</b>	<b>-0.26</b>	<b>-0.20</b>	-0.14	<b>-0.21</b>	-0.14	<b>-0.36</b>	<b>-0.34</b>	<b>-0.35</b>

**Bold correlations are significant at the 0.01 level**

## Concurrent Validity

The Total Safety Score measures the likelihood an individual will assume responsibility for his or her safety practices and avoid accidents. The purpose of this study was to establish that the Total Safety Score successfully distinguishes work-related accident rates among employees.

The WorkSafe Predictor was administered to 30 current employees of a mining company. On the basis of company safety records, employee accidents were recorded as well as supervisor rating of employee safety. The results showed that there is a significant correlation between supervisor ratings and the Predictor score ( $r=0.51$ ,  $P<.01$ ). 81% of employees with above average Predictor safety scores had had no work-place accidents. 29% of employees with below average Predictor safety scores had no work-place accidents (71% had work-place accidents). Employees with no on-the-job accidents scored significantly higher on the Predictor Safety score than did employees with the poorer safety histories ( $t = 2.349$ ,  $p = 0.02$ ). A significant correlation was obtained between accident history and the Predictor Safety score ( $r = .41$ ,  $p = .02$ ).

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# **APPENDIX 1**

## **Sample WorkSafe Predictor Profile Report**



# WorkSafePredictor



1-May-2012

Donald Sample

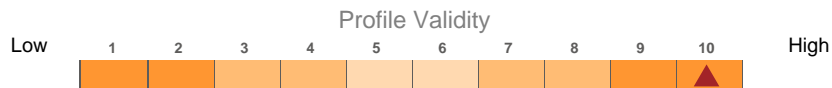
## About this Report

This report is a confidential summary of the candidate's responses to the WorkSafe Predictor. The Predictor assesses thinking patterns that underlie safe behavior at work. The Predictor contains eight scales which identify the different thinking patterns found by psychologists to "drive" behavior toward personal safety. A high score identifies a pattern of thinking that helps people to stay safe, while a low score identifies a thinking pattern that can hinder personal safety. The Predictor can assist people to evaluate how their current thinking helps or hinders their personal safety, enabling them to focus their efforts on reducing the risk of injury to an insignificant level.

People with higher scores are much less likely to be involved in a workplace incident or injury and can be expected to account for a very small percentage of workplace safety incidents. Those with lower scores will be more likely to be involved in such events, and account for a larger number of all safety incidents and Worker's Compensation claims.

The statements and results contained in this report should be treated confidentially. Since the results are based on the candidate's own view of his behavior, the accuracy of the results depends upon both his honesty and self-awareness. Therefore, the results should be viewed as hypotheses to be validated with other sources of data such as interviews and other assessment results.

The shelf-life of the information in this report is approximately 12-18 months. However, if the candidate has undergone significant changes in his work roles, re-testing should be considered.



Assesses the extent to which the questionnaire was answered accurately rather than an overtly positive or unusual way. Persons with *low Validity* scores respond in an unrealistically positive way, or obtained a profile which does not fit normal patterns. Persons with *high Validity* scores answered the questions in a candid and realistic way. A *low Validity* score indicates a high level of uncertainty in the accuracy of the profile.

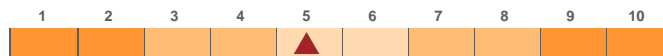
## WorkSafe Predictor Profile

### Attentional Focus



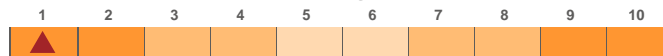
Assesses inclination to remain free from distraction and maintain focused attention on the task at hand. Persons with high *Attentional Focus* will tend to be more organized and less impulsive in their actions, able to concentrate on tasks despite external or internal distractions, and are less likely to suffer a safety incident due to inattention or impulsive action. Persons with low *Attentional Focus* are easily distracted, have difficulty maintaining focus on tasks and working in an organized, planned manner and are more likely to be involved in safety incidents.

### Harm Avoidance



Assesses the extent to which exposure to harmful energies in the environment is risked, and the extent to which safety procedures, regulations or precautions are utilized to control personal safety risk. Persons with high *Harm Avoidance* will either avoid harmful energies, or when exposed, will minimize risk through the use of safety procedures and precautions. Persons with low *Harm Avoidance* are more likely to expose themselves to harmful energies without seeing the risks, or without fully utilizing safety procedures or precautions.

### Operating Care



Persons with high *Operating Care* are confident and at ease while handling equipment or vehicles, tend to adhere to operating guidelines, operate in a deliberate rather than haphazard manner, and are vigilant of operating conditions and equipment status. Persons with low *Operating Care* are less concerned with safe operation and lack the same vigilance and ease in their operating actions.

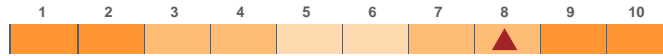
### Personal Work Standards



Assesses the extent to which a level of excellence will be sought with regard to work tasks and their successful completion. Persons with high *Personal Work Standards* will strive to improve their work, attend to details and ensure successful completion of tasks to a professional level. Persons with low *Personal Work Standards* tend to overlook personal learning or growth opportunities, show less concern for improving work outcomes, or miss important work details while seeking a quick or easy way to complete work tasks. The greater level of care associated with high *Personal Work Standards* is related to increased safety.

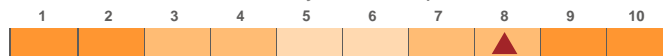
## WorkSafe Predictor Profile

### Responsible Care



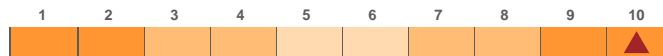
Assesses the extent to which the safety and well-being of co-workers will be actively addressed. Persons with high *Responsible Care* scores will look out for the personal well-being of co-workers, interact in a socially constructive manner and address behaviors such as unsafe acts; they will anticipate the potential for harm to others and act to address potential hazards or harmful conditions. Persons with low *Responsible Care* scores will tend to show less concern for the safety and well-being of co-workers, or for the hazards, unsafe conditions or actions that could lead to harm.

### Safety Ownership



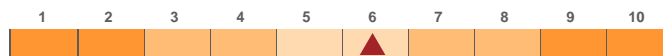
Assesses the extent to which personal responsibility is taken for behavior and outcomes, including those related to safety, irrespective of safety systems and procedures or harmful energies in the workplace. Persons with high *Safety Ownership* take responsibility for their safe behavior and the actions that lead to positive or negative work outcomes. Persons with low *Safety Ownership* place responsibility and control over safety outside themselves, and hence will be inclined to blame incidents on bad luck, workplace or supervisory deficiencies or other factors. They will tend not to exercise the degree of personal control that can help keep them safe.

### Stress Response



Assesses the extent to which internal stress or stressful conditions in the work setting are responded to constructively. Persons with high *Stress Response* will recognize stressful situations and feelings of stress within themselves, will keep their emotions in check and continue to act effectively and deliberately. Persons with low *Stress Response* will be less resilient in response to situational stressors, and may be less aware of their own level of stress and its impact upon the effectiveness and deliberateness of their behaviors or actions.

### Overall Score



### Safety Trust



This scale assesses the extent to which the test taker perceives his/her employers to have taken a thorough approach to safety in the workplace. A high score indicates that the test taker perceives employers to have placed a clear value on safety, and to have undertaken considerable effort to prevent harm to workers. These people are likely to see safety as “the way we do business”. A low score indicates a sense that employers have not measured up to the highest standards of safety programming, or that safety has taken a back seat to the priority of production. Low scores are observed among workers in situations where safety is not taken seriously and little effort is expended. In such cases, unawareness, noncompliance and unsafe acts may be more frequent, and strong safety coaching may be needed. Note that some safety conscious people who are sceptical about employers' commitment to safety (such as highly critical safety professionals) may also obtain low scores. Therefore low scores should be carefully probed with the test-taker.