Safety Culture:

A guide to effective measurement and improvement

Manufacturing Safety Alliance of BC

The Manufacturing Safety Alliance of BC, formerly known as FIOSA-MIOSA Safety Alliance of BC, was established in December 2007 to reduce the high injury rate in the food and manufacturing industries. Our mission is to foster commitment among employers to reduce the injury rate in all applicable areas. Our vision is to promote industry leadership in health and safety.

The Manufacturing Safety Alliance of BC strives to accomplish our mission and vision through the delivery of a variety of core services including:

- Training in areas such as occupational health and safety (OHS) leadership, program building, and auditing
- Consultation and Advisory Services
- The certifying partner for the Occupational Safety Standard of Excellence (OSSE) in partnership with WorkSafeBC

For further information, visit: www.safetyalliancebc.com

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Nothing in this package and the course program absolve participants from using their sound judgment in the appropriate application of the material learned.

Prepared by the MSABC Safety Alliance of BC

Purpose of This Document

This document will provide explanations and samples of policies and procedures for each required component of a Mobile Equipment program. It is the user's responsibility to modify the samples to reflect the company's workplace, the equipment being used, and the operating processes and procedures.

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Chapter 1

What is Safety Culture and why is a strong one important to your business?

Introduction

Many organizations with a comprehensive Health and Safety program are wondering why they are still not performing as well as some of their competitors. More often than not, the missing ingredient is a strong Safety Culture.

There is a huge difference in the make-up of a strong Safety Culture and a strong Health and Safety Program. You have a good health and safety policy. All policies and procedures are compiled. They are implemented. They are properly organized in the safety manual, the Joint Health and Safety Committee (JHSC) meets every month, minutes are posted and workplace inspections are done as per schedule etc. So the expectation is that your safety performance will be excellent, correct.

Nothing could be further from the truth! These are all elements of a health and safety Program, not of a strong safety culture.

A strong safety culture is an "atmosphere" within the organization that influences safe behaviour. It is more than an official program and must be ingrained in both the formal and informal activities of an organization. It is what happens when nobody is watching. It is when people are proud of their safety performance. It is when they have internalized the need to be safe. A strong safety culture must become a way of life for every employee at every level of the organization.

The composition of a strong Safety Culture
A Strong Safety Culture consists of Shared Beliefs, Sound Philosophy and Practices as well as Healthy Attitudes.

Shared Beliefs
A strong safety culture requires a strong commitment from the top. Employees must feel that senior management is genuinely committed to safety and visibly demonstrates that working safely and maintaining a safe workplace is a core value. Safety must be a corporate value, not just "another thing to get done". When the employer is genuinely committed to safety and visibly demonstrates that workplace safety is a core value, the safety climate has a solid foundation. When the workforce mirrors this core value, a heightened awareness for safety and a commitment to continuous safety improvement occurs, and then a strong safety culture has been established. The participation of all members of the workforce must be valued, encouraged and rewarded.

Sound Philosophy and Practices
Demonstrating a commitment to a healthy and safe workplace is witnessed for example, when the employer signs corporate policies and procedures, regularly tours the workplace, attends safety seminars and includes safety as a standing item at all management and employee meetings. An organization must have a vision that is supported at the top and senior management must develop a clear and concise plan to achieve the vision.

Healthy Attitudes
Changing the way people think and feel about safety is not easy. Internal motivation needs to be established to ensure success. Culture change is a process that, once embraced by the people, brings about lasting change that is passed on from generation to generation in a natural way. Culture change does not take place overnight; it takes years of continuous focus and hard work.

The benefits of a strong Safety Culture

Impact on Competitiveness
A strong safety culture contributes to competitiveness in many ways. It often means the difference between winning and losing a contract, as is so often the case in the off-shore oil industry. It may mean more motivated staff, because they are proud of being associated with the organization; it leads to greater job satisfaction and loyalty. It is a known fact that organizations with a strong safety culture also have lower absenteeism numbers. A happier workforce is a more productive workforce.

Impact on Profitability

Although health and safety has traditionally been viewed as a non-productive expenditure demanded by legislation, its power in adding to the bottom line should not be overlooked. Several studies had shown that there is strong correlation between a strong safety culture and profitability. For example, in the UK construction industry, a study showed that a 2.5% investment in an effective safety program produced a savings of 6.5% in direct labour cost. This is a very conservative number as there are several other indirectly related costs not captured under labour costs, such as re-training of other workers, product or equipment damage, investigation time after an incident and so on.

Impact on Quality

Research all over the world has shown that safer and more efficient work methods lead to better quality. In the USA for example; a study done on 626 organizations revealed more efficient work methods after safety culture improvement with a direct impact on quality. Another UK study, conducted on the British Steel industry showed a positive correlation between safely culture improvements and quality as well as productivity.

Impact on Reliability

The impact of safety culture on reliability is indirect, but very real and well documented. It has been reported that reliability enhances by three to ten times when quality improves as a result of safety culture initiatives.

In Summary

There is strong evidence to indicate that an effective healthy safety culture is an essential element of a sound business strategy, as it has so many positive effects on key areas of the business. It is also clear that safety culture does not operate in a vacuum but affects, and in turn is affected by, all other business and operational processes.

Chapter 2

What does an organization with a strong Safety Culture look like?

Introduction

The concept of a strong or healthy organizational safety culture might be a bit abstract for some people to define. This is because the term is really a summary of various aspects of an organization that leads to unforced safe behavior. In this chapter we will explore some of the organizational indicators of it, in order to identify it. In other words, we will be looking at the organizational characteristics that would have to be in place to result in a strong safety culture.

Organizational characteristics as evidence of a strong safety culture

Research pointed out that there is a strong correlation between certain organizational characteristics and a healthy safety culture. These characteristics are:

A strong leadership commitment and involvement with Occupational Health and Safety
One of the most salient features that affects people's motivation is the totality of commitment of senior management. It is absolutely vital that senior management actively demonstrate their commitment by providing leadership and resources to implement improvement strategies. Evidence of a committed leadership team includes:

- Organizational vision for OHS via the OHS Policy
- Established "prime importance" of safety in all methods of work
- Set key OHS performance indicators
- Promotion of staff involvement in OHS matters
- Being a role model

The company has adopted the concept of continuous improvement through regular safety audits
Excellence in OHS performance and culture comes through continuous incremental improvements. Regular safety audits keep individuals at all levels in an organization vigilant and motivated.

An excellent and ongoing communication method up and down the organizational structure
Once decisions have been made about how an organization will implement its OHS endeavors it needs to be communicated properly to the workforce. This seems such a simple concept, but it is extremely hard to do well. Communication should always be two way to ensure that the proper message has been received.

Vertical and horizontal communication channels are key to this communication. Studies have shown that OHS culture must be communicated both within each level of an organization and from top to bottom in order to be effective. They have also shown that the traditional top down, vertical communication is NOT effective.

The recommended approach is simple messages, continually delivered in a consistent fashion. All avenues should be utilized including:

- Management meetings
- Staff meetings
- Pay/check stuffers/flyers
- Blast e-mails
- Posters
- Crew talks

A good understanding of their inherent hazards and properly implemented control measures.
The better management and the workforce understand the hazards they are facing the safer they tend to behave. An in- depth understanding of the hazards comes about as a result of:

- Effective training in hazard identification
- Regular hazard assessments
- Appropriate occupational hygiene monitoring
- Job Task Analysis and Observations
- Workplace Inspections
- Accident Investigations

Good housekeeping
The benefits of good housekeeping are well understood when it comes to accident prevention. Another benefit that it seems to result in is a more organized mindset, resulting in better focus on the task at hand, more efficient and safer work- habits, in other words a stronger safety culture. People seem to "want" to work safely in a well-organized, clean and safe environment.

A well trained and well skilled workforce
The people are the organization; in other words the more skilled and educated your workforce is, the more likely you are to achieve success in any organizational endeavor, including having a strong safety culture. This can be achieved by strict hiring standards and protocols as well as a strong training requirement assessment and delivery program. Hire the right people to do the right job and you will be on the right track.

An extensive health and safety orientation program
The impression that an organization leaves with a new and/or young worker has a lasting impact on how they interact throughout their career with the organization. If there are clear rules; if it is obvious that the organization takes health and safety seriously; if there is emphasis on safe work habits, consequences of noncompliance etc. workers are much more likely to engage in safe work practices than if the opposite were true. Establish a positive safety culture early and workers will carry the message with them throughout their careers.

The roles of the CEO and senior executives in setting a healthy Safety Culture

The unique and influential role of the CEO (and other senior executives) in setting a healthy Safety Culture Safety excellence is becoming the norm in economically advanced societies. However, the safety culture within an organization is rooted ultimately in the vision and values of its board of directors. The board of directors must be committed, both in belief and practice, in the value-added function of effective health and safety management. Without this conviction the board members will be unable to sell the Health and Safety business case to stakeholders.

The CEO (or most senior executive) in an organization's role is to instill pride amongst their board members in the organization's health and safety record and commitment. To give them a clear idea of how the organization benchmarks relative to their competitors and how improvement can impact the bottom line. If your organization is deeply committed to professionalism and excellence, it should exemplify health and safety with the same degree of professionalism and the same aspiration for excellence. Ultimately, health and safety must become an integral part of an organization's identity to ensure a healthy safety culture.

This can be done in a practical manner by
- Including statements championing occupational health and safety in your organization's mission and vision statements
- Taking into consideration the implications of health and safety decisions
- Influencing the agenda of every meeting to ensure that Health and Safety is, and remains, integral to all aspects of business operations
- Include regular reports on the Health and Safety program in the agendas of meetings for board members, managers and staff
- Inviting representatives of the JHSC to report on significant events and your organization's progress relative to other companies in the industry
- Involving all workers in health and safety matters. This fosters communication and participation throughout all levels of your organization, supporting a culture of ownership and commitment to the Health and Safety vision

In Summary
Even though it is hard to define safety culture, per se, it is easy to identify organizations with a strong safety culture. By analyzing these organizations it is apparent that there are certain organizational characteristics that are associated with a strong safety culture.

By studying these characteristics you can learn a lot about what is lacking in your own organizational structure, in order to determine how to proceed in improving and strengthening your organization's safety culture.

CHAPTER 3

How can Management bring about a Positive Safety Culture Change?

Introduction

It is very important to remember that the promotion of a safety culture is a long term strategy that requires sustained effort and continuing interest. It probably took years for the organization to develop its existing behavior and habits and it will take years to change them. They key to success is continuous incremental changes over time.

Because every organization faces different challenges it is not possible to give a specific approach to use. In this chapter an organizational framework will be provided that organizations can use to improve their Safety Culture. The framework consists of five key logical steps. Many of the activities in these steps might happen in parallel or out of sync rather than as described here. These are logical steps, not necessarily steps in time.

The 5 Step Process to Positive Culture Change

"It must start at the top"…is a bit of a cliché, but there is no getting around it. Without a top management supportive foundation there can be no change in safety culture.

Management can implement positive cultural change through a Five-step approach:
Step 1: Establish a vision of the desired safety culture
Step 2: Develop a strategy to realize the desired changes and allocate budget resources, personnel, training, and time

Step 3: Gather input to assess the existing culture's strengths and weaknesses
Step 4: Implement a strategy that tracks safety performance and holds people accountable
Step 5: Positively reinforce safe behavioral practices

You will know positive change is happening in your organization when the safe way in which regular tasks are being done every day without anyone thinking about it, becomes the habitual way in which they are being done.

Step 1: Establish a vision of the desired safety culture

The simplest and best way to develop a vision and desired safety culture is to capture your thoughts in a policy, assign responsibilities and develop procedures.

The Safety Culture Policy should include:
- A policy statement
- Specifically defined goals and objectives

Roles and responsibilities should be clearly defined for all workplace parties including top management, department heads/supervisors as well as employees.

Governing Procedures to realize the policy should include:
- Goal setting
- Goal tracking mechanisms
- Perception Survey format and execution standards
- Safety Performance criteria
- Positive behavior reinforcement strategies
- Analyzing standards

See Appendix A for a sample Safety Culture Policy

Step 2: Develop a strategy to realize the desired changes

Developing a strategy to realize the desired changes and allocating budget resources, personnel, training, and time takes careful consideration. Changing safety culture is not an overnight job, neither is it ever fully completed. It can take several years to change, and even longer before it starts showing real results on the injury demographic scorecard.

There are five consecutive actions involved in developing a strategy to bring about a positive safety culture change:
1. Securing senior management commitment and employee involvement
2. Assessing your safety culture improvement initiative's needs

3. Developing the change drivers
4. Implementing the strategy
5. Evaluating the strategy

Consecutive Action 1

Securing senior management commitment and employee involvement.
As with any safety initiative, senior management is one of the biggest, if not the biggest factor in determining the success of the initiative. It is key that the initiative is not driven or perceived to be driven through the safety department/manager.

It is recommended that the organization sets up a multidisciplinary ad-hoc steering committee, coordinated by a safety culture initiative leader. The committee should be comprised of key personnel who can provide input into the development of the initiative. It should have representatives from these areas of expertise:

- Senior management
- Managers and supervisors
- Shop floor workers
- Plant maintenance
- JHSC
- Human Resources
- Union representation

In smaller workplaces, one person may well be responsible for multiple services and cover several areas of expertise on the committee.

The ad-hoc multidisciplinary steering committee's roles and responsibilities should at a minimum include:

- Identifying goals and objectives
- Developing terms of reference including defined responsibilities
- Gathering data from perception surveys and safety performance tracking
- Establishing timelines and specific deliverables
- Developing an information dissemination plan
- Developing an evaluation process for the initiative
- Reviewing and revising the initiative for continuous improvement

Consecutive Action 2

Assessing your safety culture improvement initiative's needs
You assess your development needs by understanding your current situation.

This is a critical step that is often not done well enough, because of the scale and complexity of assessing it. If you do not have a good understanding of where you are (in other words, have a baseline with regards to your safety culture) you will not be able to determine what resources you will require to build your safety culture improvement initiative.

It is important to get a complete big picture of your safety culture's status. There are aspects of your business that could potentially impact on your organizations safety culture.

- Organizational and Industry Culture (see appendix B)
- Community Culture (see appendix C)
- Social and Economic Pressure (see appendix D)
- Physical Environment (see appendix E)
- OHS Compliance Levels (see appendix F)
- OHS Performance Levels (see appendix G)
- Labour Relationships (see appendix H)
- Employee Perception (see appendix I)

All of these need to be expressed as a quantifiable number and weighted into a summary formula so that the impact of incremental changes in any one of these areas can be understood within the big picture.

Once you understand how these impact your organization's overall safety culture you can start to determine how and what needs to be address to result in an improved safety culture.

See Appendix J for an example of such a Safety Culture Assessment Summary Page.

Consecutive Action 3

Developing the change drivers (tools and mechanisms)
If a safety culture assessment reveals a poor safety culture, how does an organization move from this data to an effective action plan and from this knowledge to improvement?

The effectiveness of safety culture assessment summary as a tool for safety culture improvement requires processes for developing a shared organizational understanding of the underlying meanings and causes of the data, and for identifying the range of potential actions relevant to those interpretations.

Rather than viewing the assessment results as an end point, the information should be considered the starting point from which action and safety culture changes should emerge.

These tools and mechanisms involve:
- feedback processes
- collaborative problem solving
- action planning
- incremental change implementation
- behaviour based safety (see chapter 5)
- specific monitoring to facilitate the progression from data to action

See Appendix A - Safety Culture Policy – specifically referencing monitoring and tracking safety culture and improvements.

Results are typically provided to senior managers after a culture assessment, but one of the most common complaints from employees who participate in these assessments is the lack of feedback about the results and any subsequent improvement actions.

If safety culture assessments are to lead to culture change, feedback should be provided to all who were involved with the assessment. For greater impact, feedback can be combined with action planning sessions. These sessions have been shown to be most effective when they are conducted by specially trained supervisors rather than senior managers.

Feedback and action planning sessions are typically conducted in groups that have been assembled for this specific purpose. Feedback and action planning sessions must be designed with care, bringing together multidisciplinary groups while recognizing the complexities of an organization.

Assessment data will likely point to many different areas of safety culture that should be improved, accompanied by different interpretations about potential actions that could be taken in each area.

It is recommended that incremental changes are utilized. They can be implemented and tested on a small scale, changing one process or practice at a time; in only a single selected department of the organization, or organization- wide over a short pilot period.

Consecutive Action 4

Implementing the strategy
Do not confuse the implementation of the safety culture improvement strategy and the actual activities with one another. The management structure needed to govern the improvement

program is distinct from the actual activities on the floor, even though it is part of the same initiative. Both need to exist and both need to be managed well.

The activities referred to in this section are things like:
- Development of a structure identity through consistent use of the initiative's logo's font and style of communication
- Development of communication strategies through blast e-mails, crew talks, pay cheque stuffers
- Selection of a pilot area or topic and timeframe
- Development of training programs, delivery methods and scheduled training sessions and execution.

Consecutive Action 5

Evaluating the strategy
Once you have implemented your strategy, you have to continuously monitor its effectiveness.

In order to do so, you have to develop a process to evaluate the safety culture improvement strategy. The strategy must be evaluated against the goals that you have set for the strategy.

See Appendix A - Safety Culture Policy – specifically referencing monitoring and tracking safety culture and improvements

Monitor and measure key indicators for safety culture improvement to identify the initiative's strengths and deficiencies.

Indicators may include:
- Management and leadership commitment levels
- Compliance to health and safety rules
- Employee perception survey results
- JHSC finding and recommendations
- Security and equipment damage reports
- Human Resources records such as hiring practices, disciplinary reports, merit appraisal standards etc.
- Meeting the set goals of the safety culture improvement program.

Step 3: Gather input to assess the existing culture's strengths and weaknesses.

Once you have identified all the elements that impact on your organizational safety culture, you can start gathering information about it.

(Refer to the specific tools needed to do the data gathering outlined on page 13.)

The following information gathering methods; if properly executed have proven successful in gathering the required information.

Regional Communication:
Neighbors, local police stations, churches, government offices and community newspapers can all provide valuable information about the prevailing cultural trend in the area.

Document Review
- OHS documentation; for example, First Aid Records, accident investigation reports, workplace inspection reports, JHSC
- Minutes, job task observation reports, injury statistics etc.
- Business operation documentation; for example: staff meeting minutes, purchasing standards, work procedures etc.
- HR documentation; for example: hiring standards, collective agreement language, grievances, disciplinary actions etc.

Physical Inspections
- A physical walk-through inspection can verify the document review findings. It can also bring additional information to the foreground, such as non-compliance to safe work procedures, substandard work conditions etc.
- It is important to include both physical conditions and work habits in your focus

Employee Perception Surveys
- Over and above regular information that are typically gathered through normal health and safety management tracking mechanisms, employee perception surveys have proven an invaluable mechanism to gather information about safety culture. This will tell you about employee perceptions of the safety culture and the degree to which safety is embedded
- in "the way we do things around here." Conducting a safety culture survey will help point to ways employee perceptions could be improved
- It will also result in data that can be used as a benchmark against which to gauge future improvement
- Survey the management and workers of each department or service area to identify their perception regarding their safety
- Use the survey to solicit their opinions and ideas about safety, work tasks and barriers to improving safety currently in place.
- The baseline survey should be followed up with annual reviews. Repeated surveys can identify new or previously unnoticed concerns, practices, procedures or controls.

- Perception surveys should be anonymous to gather the most honest information. They should be conducted annually to measure progress and to show commitment.
- A comprehensive survey typically includes the following areas:
    - Management Commitment
    - Managerial Actions
    - Personal Commitment
    - Perceived Risk
    - The Perfect Workplace
    - Accident Causation Beliefs
    - Job Stress
    - Safety Communications
    - Emergency Procedures
    - Training Effectiveness
    - Safety Personnel Competency
    - Housekeeping
    - Safety Behaviours

See Appendix I for a sample of a safety culture employee perception survey

Converting your collected data into a Safety Profile:

Analyzing and interpreting the data

When you have collected all the data through the various collection tools:

- Organizational and Industry Culture (see Appendix B)
- Community Culture (see Appendix C)
- Social and Economic Pressure (see Appendix D)
- Physical Environment (see Appendix E)
- OHS Compliance Levels (see Appendix F)
- OHS Performance Levels (see Appendix G)
- Labour Relationships (see Appendix H)
- Employee Perceptions (see Appendix I)

…and summarized it in a quantitative way. (See Appendix J) The next task is to make sense of it.

While analyzing the data you have to extrapolate the performance of your organization with regards to the following five safety profile indicators:

1. Management leadership and commitment
To what extent does the senior management team set goals, track performance, hold people accountable and redirect safety related activities?

The data gathering tools that will be most beneficial for you to establish this are:
- Organizational and Industry Culture (Appendix B)
- OHS Performance Levels (Appendix G)
- Employee Perception (Appendix I)

2. Involvement level of all hierarchical levels in the organization

To what extent are the different organizational levels: management, supervisors and workers involved with safety activities?

The data gathering tools that will be most beneficial for you to establish this are:
- Community Culture (Appendix C)
- OHS Compliance Levels (Appendix F)
- Labour Relationships (Appendix H)
- Employee Perception (see Appendix I)

3. Existing risk level of inherent hazards

What is the current risk level associated with the hazards within the organization and what is the desire to lower or mitigate the risk?

The data gathering tools that will be most beneficial for you to establish this are:
- Social and Economic Pressure (Appendix D)
- Physical Environment (Appendix E)
- OHS Compliance Levels (Appendix F)
- Employee Perception (Appendix I)

4. Safety Performance

A holistic measurement is required, including both leading and lagging indicators. (See next step for a complete description)

In addition to the holistic approach prescribed in the previous paragraph, the following data gathering tools that should be most beneficial for you to establish this:
- Physical Environment (Appendix E)
- OHS Compliance Levels (Appendix F)
- OHS Performance levels (Appendix G)
- Employee Perception (Appendix I)

5. Mutual trust and workplace morale

People's perception of their workplace and their morale is one of the cornerstones of a strong safety culture. The data gathering tools that will be most beneficial for you to establish this are:
- Community Culture (Appendix C)

- Social and Economic Pressure (Appendix D)
- Labour Relationships (Appendix H)
- Employee Perception (Appendix I)

Establish a safety culture index/profile based on the above five indicators. This profile forms the big picture of safety culture within your organization. (See Appendix K for a sample of such a profile).

It is recommended the assessment be completed on a three-year cycle to track progress. It is key, however, to continuously monitor the individual aspects of the assessment indicators so as to monitor the progress made as a result of implemented action plans to improve safety culture.

Step-by-step guideline to convert your collected data into a Safety Profile:

In the previous chapters we presented information on how to understand what safety culture is, its benefits and how to gather information about it. Where does all of this lead to, one might ask? How do you turn this information into a useable format?

The answer is simple. The information must be converted into a visual image to allow an organization to grasp where it is with its safety culture. Even though the answer itself is simple, it might be fairly complex to arrive at.

This process requires active, cognitive input and cannot be undertaken lightly. Careful thought and the weighing of information is required. Here is some guidance to help you through the process:

1. Bring together your completed information gathering tools. These appendixes are:
   - Organizational and Industry Culture
   - Social and Economic Pressure
   - Physical Environment
   - OHS Compliance Levels
   - OHS Performance Levels
   - Labour Relationships
   - Employee Perceptions

2. Understand what you are looking at. If an organization looks at the pillars of a safety culture profile:
   - Management Leadership and Commitment
   - Involvement levels of all levels in the organization
   - Existing risk levels of inherent hazards
   - Safety Performance

- Mutual Trust and Workplace Morale

One will notice that each one represents a cross section of the various information gathering tools. Or in other words, there is information related to each pillar of your safety culture profile scattered throughout all the data gathering tools.

3. Perform a systematic review
   Through the systematic review of each of these data gathering tools, the organization's task is to identify all the bits of scattered information that impact on each one your organization's safety profile pillars. The conclusions will be different for every organization, so no typical scenario can be depicted here. A sample of such a breakdown is provided (See Appendix K).

4. Set the profile standards
   The key is to select the relevant elements from the data gathering tools for each one of the safety culture profile pillars and set them as the standard for the organization's profile. This way the organization will have a baseline and can track progress or regress.

5. Quantify your data
   After selecting your key data sets, they must be quantified in order to create values for the profile pillars (See Appendix K).

CONGRATULATIONS! The baseline culture profile is complete. This baseline profile will be used every three years to measure against. The same elements must be used to generate a new profile in order to track progress.

Developing your Action Plan for Improvement

Intuition will tell you that when you want to improve your safety culture profile that you will need to work on improving the pillars of the profile. This is correct, but also misleading as each one of these pillars is made up of different structural building blocks. These building blocks need to be strengthened individually in order strengthen the pillar as a whole.

These building blocks are the various components that make up the various data gathering tools. By strengthening these building blocks, you will strengthen your safety culture. (See Appendix J for a sample of an action plan template.)

Step 4: Implement a strategy tracking safety performance and accountability.

The ultimate goal of the safety culture improvement strategy is lower injury numbers. To look at this number in isolation can be very misleading as it is a lagging indicator. To be strategic

rather than reactive is critical if you want to be successful in the long run. In this chapter we will be looking at the best ways to measure safety performance and safety improvements.

It is important to guard against having a performance measurement process where there is measurement for measurement's sake. Just because something is measurable does not mean it has to be measured. Like any work activity, measurement has associated costs and so needs to be undertaken efficiently.

The key steps in developing a performance measurement mechanism include:

Identify the main processes
In the case of health and safety performance, these will be the management processes, risk control systems and workplace injury preventive measures

Analyze the identified processes
Take a closer look at the management processes and risk control systems. If they have been designed properly, it should be relatively easy understand how they logically flow and operate on the ground

Identify the critical measures for each management processes and risk control system this can be done by asking the following questions:
- What outcome do we want?
- When do we want it?
- How would we if we achieved the desired outcome?
- What are people expected to do?
- What do they need to be able to do it?
- When should they do it?
- What result should it produce?
- How would we know that people are doing what they should be doing?

The measures which are derived should be:
- Accepted by and meaningful to those involved in the activities being measured and those who need to use the measures
- Simple/understandable/repeatable/objective
- Capable of showing trends
- Unambiguously defined
- Cost-effective in terms of data collection
- Timely
- Sensitive; and should drive appropriate behaviour

Establish baselines for each measure

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Once the individual measures have been established then baseline data needs to be established. This will in effect be your starting point.

Establish specific goals or targets for each measure.
This should be done by involving the people who are expected to execute the particular activity rather than imposing dictatorial goals or targets on them.

Assign responsibility for collecting and analysing the data
It is important to assign specific responsibility for collecting and analysing the data, and to hold people accountable for this activity.

Compare actual performance against the set targets
The focus should be on achievements, not failures; it is important to analyse the reasons for substandard performance if improvements are to be made.

Develop corrective actions
The data should provide the correct type of information to enable decisions to be made about what corrective action is required.

Evaluate the established measurement mechanisms
The established measurement mechanisms need to be reviewed regularly to ensure that they remain appropriate, useful and cost-effective.

There is no single reliable measure of health and safety performance. There is no simple checklist that could capture the true level of performance. There needs to be cognitive input, fact weighing and a deep understanding of safety to get meaningful results. Effective performance measurement provides information on both the level of performance and why the performance level is as it is.

The primary purpose of measuring health and safety performance is to provide information on the progress and current status of the strategies, processes and activities used by an organization to control risks to health and safety. This means that you have to measure the full scope of processes, activities and situations related to safety performance. This includes at a minimum, but is not limited to the following:

Progress towards OHS goals
Proper OHS management requires the setting of measurable goals. Tracking the progress towards these set goals is key to the strategic success of your OHS Management system.

Safety Culture Perception survey reports (annual)

Keeping a close eye on the outcomes of your safety culture perception survey summary reports will provide valuable insight into the safety performance of your organization (See Appendix A).

Compliance levels to safety rules and following safe work procedures (quarterly)
The level of compliance to rules and safe work procedures is a key leading indicator that can help you establish the positive or negative movement of your safety culture and should be monitored very closely. Job task observation reports are a valuable resource here and should be monitored closely.

Injury demographics (quarterly)
By tracking and reviewing the full scope of injury demographics emerging trends can be identified quickly before it becomes an unmanageable affair. Various indicators are helpful, such as near misses, first aid incidents, musculoskeletal (MSI) symptom reports, type of injury, causal agents, etc.

Workplace wage Insurance costs and incident/accident related cost
By tracking accident and damage costs closely you will get another perspective of the effectiveness of your OHS program. You should always remember that this is an post injury/damage type injury and therefore lagging in nature. That being said, it can highlight deficiencies in your OHS management system, such as a poorly functioning Return-to Work (RTW) program.

Workplace inspections trends (quarterly)
By tracking and analyzing workplace inspection reports, existing trends in safety performance related to poor workplace conditions and practices can be identified. This provides a strong leading indicator in measuring safety performance.

Accident Investigations trends (quarterly)
This is one of the most underestimated tools in measuring safety performance. Properly done, accident investigations point out all the flaws in your OHS management system. Accident investigation, causal trends and implemented corrective action trends are a true measure of the effectiveness of your OHS management system.

Hazard assessment reports (quarterly)
The philosophy behind good safety management practice is that your hazard risk levels should be reduced. By monitoring the decrease or increase in the risk levels associated with your work activities you can effectively measure your safety performance.

JHSC recommendations (quarterly)
By considering the recommendations made by your JHSC you can get a clear picture of the performance of many aspects of your OHS Management system. Findings from this analysis can

point to the appropriateness of training standards, supervisor competency, quality of workplace inspections, quality of accident investigations etc. The caveat here is that your JHSC must be functioning well and made up of individuals that truly understand safety management and their role in it.

Poor performance and accountability

All the efforts around setting policy, developing standards, developing procedures and communication of such is in vain if those for whom they are intended do not follow them.

"Even if all of the other elements of a due diligence defence can be demonstrated in court, a lack of ongoing enforcement of the system is treated as a lack of complete due diligence and the defence will fail on this ground." (Supreme Court of Canada, Regina versus Sault Ste. Marie)

Discipline for OHS must start at the top, with top management holding department heads accountable, department heads holding middle managers accountable and supervisors holding workers accountable.

To be effective, discipline in the workplace must be:
- Supported by senior management
- Supported in writing in policies and procedures and in job descriptions
- Consistent and implemented without bias
- Remedial as opposed to personal
- Progressive
- Appropriate to the infraction
- Well documented

Step 5: Positively reinforce safe behavioral practices

Introduction

There are many strategies and action items that can be used to improve the safety culture of your organization. The best ones will be based on the safety culture profile of your organization. For example, if you found from your data gathering endeavors that your community does not support a positive safety culture, efforts around this would be most appropriate, if you found that your management team is not fully engaged, efforts in this regard would be most appropriate. One of the key strategies that can be used is to positively reinforce safe behavioural practices.

An important caveat is that a behavioural safety initiative is not a cure-all panacea that is intended to replaces all safety efforts. It is merely a tool that could be used to enforce identified positive safety behaviour, which should slowly improve safety culture over time.

Behaviour based safety

Behaviour based safety is best described as the application of the science of behaviour change to real world problems. Behaviour based safety focuses on what people do, analyzes why they do it, and then applies a research supported intervention strategy to change what people do. The concept of behaviour based safety began with the work of Herbert William Heinrich in the 1930's. Heinrich's determination was that human error was responsible for 88% of all the accidents. What was critical in this determination was that it was the first attempt to understand human interaction with various external factors, such as the environment, equipment, procedures and workplace attitudes.

Focusing on unsafe behaviours can lead to change resistance in an organization. The perception can be that the minor details are focused on rather than physical changes to a work environment to make it safer. It is plausible that workers may view behaviour based initiatives as management not committing to capital expenditures and assigning blame to workers for accidents. However, with persistence over time the resistance to change lessens as positive behaviours are rewarded.

Chapter 4

Five Steps of Behaviour Based Safety

There are five steps most commonly used to achieving a behaviour based safety program. In this section we will explore the 5 steps in depth. These steps are:

Step 1: Identifying the desired behaviour to change

Step 2: Establishing data (record)

Step 3: Reinforcement of new behaviours

Step 4: Evaluation of program effectiveness

Step 5: Program review

A loose definition of why people behave in unsafe manners is simply put as the way things are done around here. It suggests a complacence with workplace activities and quite often is reinforced by a personal belief that because an accident hasn't happened, it won't happen.

However, research suggests that for every 330 unsafe acts there will be 29 near misses and one major accident or fatality will occur. There are a variety of reasons why these beliefs are reinforced in the workplace. Work related reinforcements include rewarding workers for cutting corners or management condoning unsafe behaviours. Condoning unsafe behaviour undermines employee confidence of management's commitment to safety.

Peer pressure is a significant factor in bringing about positive workplace changes. It is very powerful and should be fully utilized. When work teams are encouraged to work safely the positive pressure is for all workers to work safely in order for individual workers to feel as though they are part of a team. The efforts to establish these positive safety norms can have both positive and negative effects. If the approach to safety management relies upon

disciplinary measures it could result in deliberate suppression of accident reporting or near miss reporting and foster anxiety and resentment within a team. Conversely, the use of praise as a reward for exhibiting safe behaviours can lead to long lasting behavioural change and very importantly attitude changes.

Practical work groups or teams have the greatest influence in establishing lasting changes. By encouraging groups and social approval, positive behaviours and attitude will result. The bulk of the workforce becomes the driver of the safety program with managers acting as facilitators. Using this approach, workers become more responsible to the safety program and are better able to identify and define a safe working environment.

Through understanding of the effects of unsafe behaviours on the workplace, planning for instilling change can begin. All workplace stakeholders must be involved in the change process in order for it to be effective.

Step 1: Identification

The starting point for the process of creating positive safety behaviours begins with identifying behavioural issues associated with unsafe acts in the workplace. These can be quickly identified by examining the organization's existing accident records, near miss reports, standard or safe working procedures and completed risk assessments. Analysis of the data should not be restricted to the current year but should cover the preceding two years at a minimum and four years at a maximum.

Analysis of historical accident and near miss reporting assists an organization in understanding whether causation stems from work processes or behavioural causes or a combination of the two. Once the organization has identified the causes, the information is further classified into place of work. From there an organization can clearly see what role behaviour, work processes, or both, have in causing an injury. This particular style of analysis allows different types of tasks to be prioritized in relation to their injury potential and to provide focus on the unsafe behaviours.

By using the historical accident data, an organization can clearly gain a sense of the frequency with which unsafe behaviours occur. Through continual or daily measurement accidents can be prevented before they occur. This is achieved by measuring the critical safety behaviours within tasks. This identification gives rise to a set of safety performance indicators. These indicators help workers and managers alike to identify, track and debrief on unsafe behaviours weekly. The net result of weekly review is fewer accidents and near misses.

The next aspect of the identification process is to establish objectives. Objectives should be specific, observable and measurable. The objectives should clearly identify the negative

behaviours as well as the expected correct behaviours. Within the objective, tasks should be clearly identified and identify critical behaviours. If necessary, written job descriptions can be used to supplement the identified tasks. It is equally imperative that the tasks be easily observed and measurable to review the performance against the established objective.

It is through the establishment of the objectives that safety performance indicators are developed. The indicators should be specific to departments unless the organization is small. The number of unsafe behaviours targeted by each department should be kept to a manageable number. As this is an ongoing process. If there are more unsafe behaviours related to a task those behaviours can be addressed in another phase. Specificity is a critical aspect of the safety performance indicators. Indicators should be written as clearly as possible for ease of analysis and to be better able to provide effective feedback. Lastly, indicators should be written in a positive tone to further encourage people to be safe.

Step 2: Record
Recording is the next step in the change strategy process. The data is captured by trained observers. Observers should be trained to have a full understanding of:
- Why the organization is undertaking this process
- Rationale for workers' unsafe behaviours and how these behaviours can be eliminated
- Methodology behind creating the safety performance indicators
- How to set performance targets with their peers
- How to recognize and manage resistance to change
- How to give constructive feedback to others
- The ground rules for observations
- Who to file the observation data with

By establishing a baseline, an organization can determine its current position. This enables meaningful comparison with future performance. Data collection and analysis also enables an organization to check its performance and to communication performance changes to its workforce. Data collection and analysis is a vital tool for setting new goals that are specific, measureable, realistic and challenging.

Baseline data collection should be conducted for a four-six week period. This allows each working group to establish their own baseline so that any improvements are captured and compared against the beginning point. Feedback is typically not provided to the work group during the baseline gathering period. The purpose for not providing immediate feedback is to obtain a true picture of the safety challenges within the working group and the organization as a whole.

To capture the safety performance indicators observers can have three basic columns: safe, unsafe, and unseen. To calculate the average safe score each column is added. Safe points are awarded when team members work safely. Unsafe points are awarded when the members of team are not working safely and unseen points are awarded when a safe act is committed but not observed.

Let's consider the following scenario; a production team consists of ten people on a production line, the production line frequently has excess materials lying about that create tripping hazards, the team also does not respect the need for pedestrian walkways and consistently blocks shelving to put storage items away. The team has been limited to a maximum of 20 unsafe behaviours overall each day.

Behaviour	Safe	Unsafe	Unseen
All team members must put away excess material bins when they are full.	6	3	1
All team members must walk in identified pedestrian walkways.	0	10	0
All team members must ensure access to shelving in their work area.	4	1	5
Totals	10	14	6

For the purposes of overall calculation the unseen scoring is ignored, the unseen can be used at a later time for developing new safety performance indicators. To gain a total score, the number of safe acts and unsafe acts are added together. The result of the total safe is divided by the total number of safe acts and unsafe acts. This result is multiplied by 100 to achieve a total percentage.

$$\% \text{ Safe Acts} = \frac{\text{Total Safe Acts X 100}}{\text{Total Safe Acts} + \text{Total Unsafe Acts}}$$

Following the collection of the baseline data, target setting begins. Each working group meets to discuss the findings of the baseline period. This meeting will show the working group the total average safe act percentage score.

The meeting should also show what behaviours were consistently performed safely and where improvement is needed.

The goal of the meeting is to establish an achievable target based on the baseline percentage of safe acts. Work groups should be reassured that failing to reach targets won't result in disciplinary actions and that the work group will meet weekly to discuss feedback and potential for improvement.

Step 3: Reinforcement

Improvement of safe working behaviours has real and tangible benefits to employers. Ultimately at the end of the process the organization should see improvement in product quality, production quantity and overall safety statistics. These improvements cannot be achieved without the reinforcement of positive working behaviours.

Reinforcing behaviour is not as simple as saying "good job." Workers must be motivated to do a good job. A well-known model of motivational behaviour is Abraham Maslow's Hierarchy of Needs. Dr. Maslow's theory believes that all people have driving forces within them and that as each need is met it will encourage the individual to strive forward to the next level.
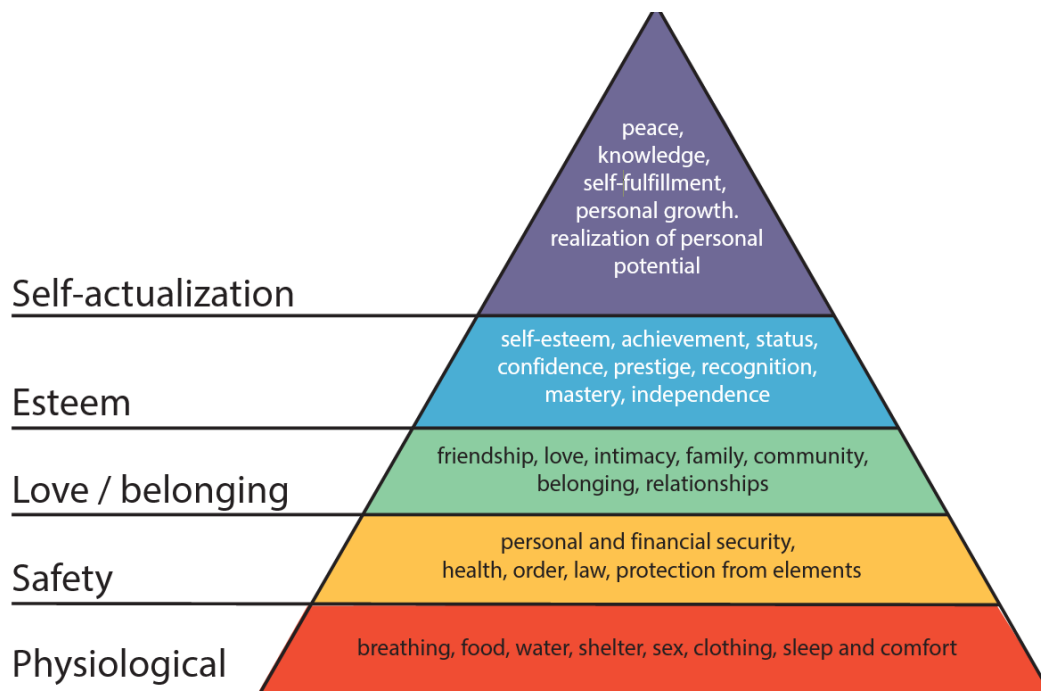
Figure 1 Maslow's Hierarchy of Needs

An understanding of these basic needs helps an organization to shape its positive behaviour reinforcement strategies. The use of positive reinforcement helps shape and strengthens the desired outcome. Some advantages to positive reinforcement are:

- People prefer recognition and praise over punishment;
- Reward strategies motivate safe behaviours;
- Reward strategies take less time and effort than enforcing disciplinary strategies; and
- Reward strategies produce more positive relationships with administrators.

Consequences that are positive, immediate and certain are most effective. However the effect of the reinforcement is dependent upon how a person perceives them. The perception is dependent upon the sincerity of the message and the individual person's self-worth.

There are a number of principles identified in Practical Loss Control Leadership, Third Edition that apply to motivating worker safety.

The Goals and Objectives Principle states "Motivation to accomplish results tends to increase when people have meaningful goals and objectives towards which to work." These goals need to be broken down into specific objectives which are both obtainable and measurable.

The Principle of Involvement states "Meaningful involvement increases motivation and support." Involving and actively seeking worker input in goal setting develops a collaborative climate and mutual cooperation. This in turn instills a feeling of ownership and increased support for the objectives.

The Principle of Mutual Interest states, "Programs, projects and ideas are best sold when they bridge the wants desires of both parties." This principle encourages parties to form a connection of values between the desire of the organization and their own individual needs.

The Psychological Appeal Principle states "Appeals to feelings and attitudes tend to be more motivational than appeals only to reason." By relating challenges to an individual's personal interest, desires, family, or community people are more likely to listen to the message.

The Information Principle simply states, "Effective communication increases motivation." When a person clearly understands the desired outcome, and how their actions contribute to that outcome, their personal motivation increases.

Lastly, the Principle of Behaviour Reinforcement states, "Behaviour with negative effects tends to decrease or stop; behaviour with positive effects tends to continue or increase." The use of positive reinforcement tends to become more attractive to an individual that there is less need to continue substandard behaviours or unsafe acts.

Consistency in applying positive behaviour reinforcement is critical to the overall success of the change management process. Failing to consistently recognize and reward safe working behaviours will result in a doomed process. Modeling the desired behaviours, correcting through positive reinforcers and undertaking a mutual problem solving approach contribute to the success of the change management process.

Step 4: Evaluating Change

The fourth step of the process is to evaluate the extent which the positive reinforcement is having on unsafe behaviours. The evaluation process is conducting concurrently with the positive reinforcement and recognition process. Each group should have weekly meetings to discuss findings of the observers. This discussion should be focused on their ongoing behaviours. The discussion should also focus on:

- The prior week's percentage increase or decrease of the safety performance indicator score
- The top three improving items
- The top three decreasing behaviours
- The average safe percentage score for each category
- The percentage of observations conducted in each category

The data is further analyzed to spot and address deviations. This is accomplished through monitoring trends and identifying discrepancies in average safety scores between shifts.

Invariably, the activities of an organization will unintentionally affect safety activities. Through continual monitoring and trend identification, the impact of these activities will be readily apparent to the observation team. If there is an unexpected decrease in expected performance the observation team can move quickly to determine why the dip occurred and what is impacting the performance of a particular work group or team.

Through monitoring data for each shift, discrepancies can be addressed quickly. Larger discrepancies could indicate problems with understanding of the targeted behaviours and expected outcomes. A lack of regular observations could indicate problems with a lack of continued management support for the initiative. Appropriate solutions to problems can only be identified through monitoring the frequency of observations.

Step 5: Program Review

The last step in the change management process is follow through. Follow through is predicated on appropriate actions based on fact and evaluation of data. This data provides for the formulation of a new set of safety performance indicators. These new indicators must be specific, clearly communicated, simple and easily attainable.

It is imperative to continue coaching on the basis of significant, verifiable performance and results. In essence, this is continued monitoring and evaluation of the change data. The change data creates the baseline of the performance indicator and clearly indicates improvement or a decrease in safety results.

Through ongoing meetings with work groups, workers can learn to trace performance back from consequences to basic causes. Identifying and understanding basic causes can contribute to the creation of new safety performance indicators if warranted.

Demonstrating ongoing commitment to helping people perform as best as possible and meeting requirements will continue to drive the positive reinforcement behaviours forward. As part of a commitment to coaching, ensure successes along the path are celebrated. Success celebration should continue as part of the follow through process for an organization. A sample Behavior Based policy and procedure is included (See Appendix L).

In summary: addressing and implementing behaviour-based safety is a complex psychological process that has many facets, challenges and rewards. By engaging in understanding how the process works the organization, as a whole, is rewarded with a more informed, stronger and safer workforce.

Through positively reacting to the data produced in the process, an organization emerges as more responsive and in tune with the needs of its workers; thereby improving and strengthening the overall safety culture of the organization.

Resource list

Journals, Articles

A Guide to measuring Health and Safety Performance, HSE Books, 2001,

Achieving the Competitive Advantage - What senior executives need to know about
Occupational Health and Safety

Management (2010), Food Industry Safety Association of British Columbia.

Developing Health and Safety Programs, Health Care Health and Safety Association of Ontario,
Toronto 1999

Health and safety benchmarking. Improving together. Guidance for those interested in applying
benchmarking to health and safety INDG301 HSE Books 1999

Health and safety climate survey tool Information pack, HSE Books 1997, ISBN 0 7176 1462 X
Safety Management and the CEO, Australian Government (Civil Aviation Safety Authority)

Textbooks/Manuals

Al-Hemoud, Ali M., Al-Asfoor, May M. (2006) "A behavior based safety approach at a Kuwait
research institution." Journal of Safety Research.

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Edition. Det Norske Veritas, 2007

Bird, Frank. Germain, George L. Practical Loss Control Leadership, International Loss Control
Leadership, 1985. Cooper, D. (1998). Improving Safety Culture: A Practical Guide. New York:
John Wiley & Sons, Inc.

Hay, Douglas, Safety Culture Assessment Tool, Workplace Press, New Zealand

Hewitt, Mike, Relative Culture Strength – A Key to Sustainable World Class Safety Performance,
Du Pont 2009

Matthews, Grainne A. "Behavioral Safety from the Consumer's Perspective: Determining Who
Really Provides Behavior safety." Cambridge Center for Behavioral Studies.

Mayze, Brett R. and Bradley, Lisa M, (2008) Safety culture : a multilevel assessment tool for the
construction industry, Queensland University of Technology

Simon, Steven I. Ph.D. (2005) Safety Culture Assessment as a Transformative Process, Culture
Change Consultants, Larchmont, NY

Stewart, J.M. (1999). Managing for World Class Safety. Report n Research on the Management
of Safety, Rottman

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Appendices

Appendix A – Safety Culture Policy

**Senior Management Commitment
& Safety Culture**

Policy Statement

ABC Company recognizes the importance of establishing and maintaining a strong safety culture.

ABC Company believes that a "well" working "atmosphere" has a direct relationship to health and safety performance. Top management has a duty and obligation to foster the development of a strong safety culture throughout the facility. Management must lead by example to ensure continuous improvement of health and safety performance.

Goals

- The establishment and maintenance of a strong safety culture
- Increased health and safety performance (improved safe behaviour)
- Continuous quality improvement

Objectives

- Develop standardized measurement tools to measure Health and Safety performance at all levels of the organization
- Review health and safety trends
- Respond to worker concerns
- Establishment of a regular health and safety communication schedule
- Encouragement of health and safety performance
- Improved top management involvement in health and safety matters

Definitions

Safety Culture: is the necessary full attention to safety matters and the personal dedication and accountability of all individuals engaged in any activity which has a bearing on health and safety.

Roles and Responsibilities

Top Management

- Set Health and Safety goals annually.
- Establish a schedule and action plan for each goal to be achieved, incorporating resources available, responsible parties and target dates. (Complete recording form.)
- Hold goal progress report meetings on a 3 monthly basis.
- Review all health and safety related statistics on an ongoing basis to identify any trends to ensure better hazard control (Complete review record form).
- Review all health and safety culture measurement reports on an annual basis to identify any problem areas and sign the appropriate forms.
- Conduct an annual health and safety inspection as per ABC Company Workplace Inspection policy and procedures and record such in writing.
- Promptly respond to health and safety concerns as per JHSC policy and recommendation procedure as noted by the JHSC or employees.
- Regularly encourage health and safety performance by positive reinforcement (acknowledges good health and safety performance).
- Promote "off-the-job" safety activities such as wellness, driving safety and home safety.
- Comply with all roles and responsibilities bestowed on them.

Department Heads/Supervisors

- Complete the annual culture assessment reports for their departments.
- Provide top management with required information and statistics for health and safety reviews.
- Conduct workplace inspections and accident investigations as per relevant policy.
- Communicate Health and Safety information on a regular basis as per Communication policy. Health and safety information include aspects such as
  - Review of health and safety procedures
  - Incident trends, claims management issues
  - Investigation outcomes
  - Workplace inspection outcomes
  - Return to Work procedures
  - New relevant legislation
  - Other relevant information such as WorkSafeBC reports and or notices
- Regularly encourage health and safety performance by positive reinforcement (acknowledges good health and safety performance). This must documented on the employees' personal file and feedback should be given during performance appraisals.
- Comply with all roles and responsibilities bestowed on them.

NB: DOCUMENTATION OF THIS COMMUNICATION IS REQUIRED FOR DUE DILLIGENCE PURPOSES (Keep a log, copy and or minutes as required)

Employees

- Participate in all aspects of the health and safety program.
- Provide any relevant information to management in for them order to establish the safety culture status. (Example: completing annual safety culture assessment surveys).
- Encourage co-employees to develop safe work habits.
- Report deviations from the set safe work procedure to their supervisor.
- Comply with all roles and responsibilities bestowed on them.

CEO Name: _____   Date: _____

Chief Executive Officer

ABC Company

Appendix B: Organizational and Industry Culture

Location	Department					
Date	Time					
Name of Person(s) Conducting Assessment:						
Organizational Culture	1	2	3	4	5	Explanation

Does senior management demonstrate a strong commitment to safety?					
Are OHS goals set annually?					
Are adequate resources allocated to achieve OHS objectives?					
Does the organizational structure reflect clear communication channels to allow employee feedback?					
Does the organizational structure use cross-functional management teams to address OHS?					
Does the organization encourage participation on multi-disciplinary teams from all employee levels?					
Does the recruitment and selection process support the organization's OHS objectives?					
Does the organization reward positive health and safety practices and attitudes?					
Does the organization consider safety performance in individual employee performance reviews?					

Industry Culture	Yes	No			Explanation
Does the industry help drive new OHS initiatives?					
Do industry organizations support OHS activities?					
Do similar industry organizations support each other through sharing of OHS information and programs?					

Appendix C: Community Culture

Community Culture	1	2	3	4	5	Explanation
To what extent are workplace injuries and fatalities perceived as acceptable within the community?						
Does the community support OHS through education in the secondary and post-secondary levels?						
Do secondary or post-secondary institutions in the community require a minimum level of OHS education to graduate?						
Is OHS research ongoing within the community?						
Does the community allocate appropriate resources to support OHS research initiatives?						
Does the community partner with employers to support OHS initiatives such as Raise Your Hand, Worker Day of Mourning, NAOSH Week?						

Appendix D: Social and Economic Pressure

Social and Economic Pressure	1	2	3	4	5	Explanation
Do the organization's business planning strategies incorporate planning for economic downturns?						
Does the strategy foster trust between managers and workers?						
Does the organization actively engage at-risk workers, for example, visible minorities or migrant workers?						
Does the organization ensure OHS materials are multilingual to ensure migrant workers understand rights and responsibilities?						
Does the organization have a workplace bullying policy?						
Is the workplace bullying policy enforced?						
Does peer pressure in the workplace support or undermine health and safety?						
Are employees encouraged to voice safety concerns?						

Appendix E: Physical Environment

Physical Environment	1	2	3	4	5	Explanation
Is the occupational health and safety policy statement posted in a conspicuous place?						
Are safe work procedures posted throughout the plant?						
Are the safe work procedures posted pictorially or in a multilingual format?						
Are areas requiring Personal Protective Equipment (PPE) readily apparent?						
Is emergency preparedness equipment readily available and visible?						
Are spill kits readily available?						
Is the plant or production area generally tidy?						
Is the workplace well organized?						
Is the work place well maintained?						
Are materials and resources readily available to workers?						
Does the physical layout support appropriate process flow in a safe manner?						
Does the organization have appropriate lighting?						
Does the facility use colour schemes that are conducive to a safe work habits?						

Appendix F: OHS Compliance Levels

OHS Compliance Levels	1	2	3	4	5	Explanation
Is there a documented OHS management system in place?						
Is there a documented OHS policy?						
Is there a copy of the Workers' Compensation Act (WCA) and the Occupational Health Safety Regulation (OHSR)						
Is OHS considered when purchasing goods or services?						
Is health and safety a standing item in company meeting agendas?						
Does the organization make an annual investment in OHS activities or training?						
Do managers and supervisors have formal training in applicable						
Are OHS roles and responsibilities assigned as required by the						
Are Company Directors or Boards aware of their OHS responsibilities and are they trained to meet those						
Does the company ensure subcontractors meet OHS regulatory requirements?						
Does the organization have a formal system for identifying health and safety issues?						
Does the organization communicate new work processes to workers?						
Does the organization consult with workers when a new safety hazard is identified?						

Does the organization have a formal documentation system that encapsulates consultation between workers and managers in the risk assessment and risk control						
Is there a formal hazard identification program in place?						
Do all areas of the organization actively participate in hazard reporting?						
Does the organization conduct regular workplace inspections in conjunction with workers?						
Are all risks assessed properly?						

Appendix F: OHS Compliance Levels

OHS Compliance Levels	1	2	3	4	5	Explanation
Are workers involved in the risk assessment process?						
Are subcontractors involved in the risk assessment						
Are risk assessment records retained?						
Do the records indicate that the hierarchy of controls is used when determining controls for identified risks?						

	1	2	3	4	5	Explanation
Does the organization consult with workers during the risk control process?						
Following implementation, are controls checked to measure effectiveness?						
Are controls periodically reviewed to ensure they are still effective?						
Are there documented safe work procedures (SWP) for employees or contractors?						

	1	2	3	4	5	Explanation
Are applicable material safety data sheets (MSDSs) available for all chemicals on site?						
Are new workers or contractors orientated to the site?						
Does the organization have a training plan to coordinate the training and/or re-training of equipment operators, permit issuers, etc.?						
Does the organization conduct follow up assessment of new workers or contractors to ensure competency?						
Does the organization have a JHSC or Health and Safety Representative (small business)?						

Is it evident the JHSC or Health and Safety Representative is active within the organization?					
Does the organization have appropriate emergency preparedness planning?					
Does the organization conduct annual drills of emergency preparedness programs?					
Does the organization have a health and safety record management system?					
Does the organization have an injury management/return to work					
Are all workplace parties aware of their responsibilities to the IM/ RTW program?					

Appendix G: OHS Performance Levels

OHS Performance Levels	1	2	3	4	5	Explanation
Does the organization conduct regular reviews of OHS data for trend identification?						
Does the information review include: a. Number of hazards reported? b. Number of accidents reported? c. Number of near miss incidents? d. Number of critical part failures? e. Incidents involving property damage? f. Production error data? g. Number of risk assessments completed? h. Number of SWPs developed and implemented? i. The number of OHS training courses delivered? j. The number of OHS training hours coordinated and delivered? k. The number of participants in the OHS training?						
Does the organization review IM/RTW data?						
Does the data review of IM/RTW include: a. Number of Loss Time Injuries? b. Duration of Loss Time Injuries? c. Number of Medical Aid only injuries? d. Number of First Aid only injuries? e. Number of early interventions offered? f. Number of RTW plans developed? g. How long it takes for a RTW to be developed?						

Appendix H: Labour Relationship

Labour Relationships	1	2	3	4	5	Explanation
Does the union executive share the same OHS philosophy?						
Does the union or union representative actively participate in the						
Does the union or union representative participate in OHS events, such as NAOSH week?						
Is OHS a standing item on union management meetings?						
Does language in the collective agreement reflect the union's commitment to OHS?						
Does the union actively participate in OHS decision making?						
Does the union challenge negative OHS decisions from management?						
Does the union enforce disciplinary measures against members who are non-compliant with organization OHS						

Appendix I: Employee Perceptions

Employee Perceptions	1	2	3	4	5	Explanation
How do you rate your overall satisfaction with the						
How do you rate your overall satisfaction with the working environment?						
Do you believe safety is a top priority in your organization?						
Does senior management communicate safety to the rest of the organization?						
Are safety items on an ongoing agenda for consideration during staff meetings?						
Does your organization encourage and reward workers for reporting hazardous conditions?						
Is personal accountability for safety considered during annual performance reviews?						
Are hazards corrected quickly once they are brought to management's attention?						
Is safety equipment readily available when needed?						
Do employees and management work together to create the safest environment possible?						
Does your supervisor give you safety information to do your job safely?						
Does your supervisor address safety concerns or questions in a timely fashion?						
Did you receive safety training as part of your orientation?						
Does your company provide you with materials to prevent injuries or accidents?						
Do you fear being criticized or reprimanded for reporting an injury?						

Employee Perceptions	1	2	3	4	5	Explanation
Do you feel able to satisfy both your job and family responsibilities?						
Do you feel forced to choose between job and family						
Do you feel the pace of work enables you to do a good						
Do you feel as though the amount of work you are asked to do is reasonable?						
Do you believe the organization has realistic expectations of its employees?						
Does your organization encourage and practice						
Do you believe there is a strong feeling of teamwork and cooperation within the organization?						
Do you understand how your work directly contributes to the overall success of the organization?						
Do you believe your job is important in helping the organization to accomplish its mission?						
Does your supervisor provide you with regular information about the mission and goals of the organization?						
Are you familiar with the strategic goals of the						
Do you understand the strategic goals of the organization?						
Does doing your job well give you a personal sense of satisfaction?						
Does your manager/supervisor treat you in a fair manner?						
Does your supervisor/manager treat all workers fairly?						
Do you believe favouritism is an issue?						
Do you believe your manager/supervisor is consistent when administering policies?						
Do you believe the organization treats all its employees in a fair manner?						

Employee Perceptions	1	2	3	4	5	Explanation
Do you believe your manager/supervisor always treats you with respect?						
Do you believe your manager/supervisor always listens to what you are saying?						
Do you believe the organization values your contribution to the workplace?						
Do you believe your co-workers care about you as a						
Do you believe you can disagree with your supervisor/manager without fear of getting into trouble?						
Do you feel comfortable sharing your opinions at work?						
Do you feel people with different ideas are valued within						
Do you feel your ideas and opinions count at work?						
Do you believe you received adequate training to do your						
Is your manager/supervisor actively interested in your						
Does your manager/supervisor encourage and support						
Are you encouraged to learn from your mistakes?						
Do you believe your work is challenging?						
Do you believe your work is stimulating?						
Do you believe your work is rewarding?						

Appendix J: Safety Culture Assessment Summary Page and Action Plan

Safety Culture Assessment Summary Page and Action Plan.

Review the 8 completed business aspect assessments (Organizational and Industry Culture, Community Culture, Social and Economic Pressure, Physical Environment, OHS Compliance Levels, OHS Performance Levels, Labour Relationships and Employee Perception)

Business Aspect Assessment Type	Overall Score	Description of the Shortfalls	Description of the Corrective Actions planned	Responsible Person	Target Date
Organizational and Industry Culture	/60				
Community Culture	/30				
Social and economical pressure	/40				
Physical Environment	/65				
OHS Compliance levels	/185				
OHS Performance levels	/100				
Labour relationships	/40				
Employee Perceptions	/240				

The information gathered here are key to establishing a Safety Culture Profile.

Appendix K: Sample: Safety Culture Profile

Sample: Safety Culture Profile

Management Leadership And Commitment	Setting Goals	Keeping Track Of Goal Progress	Is Involved With Safety Evaluation	Assigned Specific Roles And Responsibilities	Holding People Accountable
Score	4	7	5	3	6
Total Score: 25					

Involvement Of All Levels In The Organization	Dept Heads	Supervisors	Workers	JHSC	Contractors
Score	2	5	3	5	2
Total Score: 17					

Existing Risk Levels Of Inherent Risk Levels	Occ Hygiene Surveys	Risk Assessments	Job Task Analysis	JHSC Minutes And Reports	Uncontrolled Risks
Score	3	3	2	4	7
Total Score: 19					

Safety Performance	Injury Demographics	Workplace Inspection - Trends	Injury Investigation - Trends	OHS Rules Compliance	Hazard Reduction Index
Score	2	4	3	2	1
Total Score: 12					

Mutual Trust and Workplace Morale	Perception Survey Results	Frequency of EAP Usage	Absenteeism	Labour Relations Grievances	Number and Quality of Safety Recommendatio
Score	4	4	5	4	1
Total Score: 18					

Safety Culture Performance Index
(2008-2010)
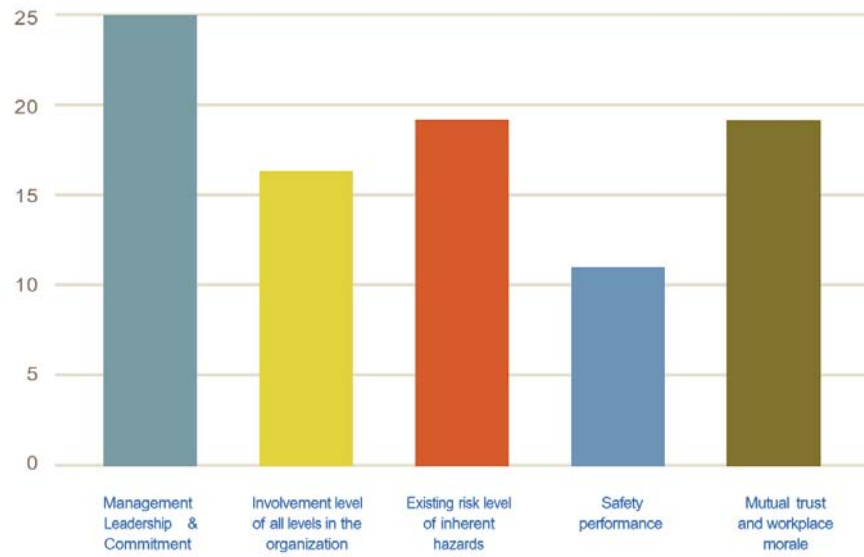
Appendix L: Sample Behaviour Based Safety Program

Sample behaviour based safety program

Policy Statement

ABC Company recognizes the importance of establishing and maintaining a behavior based safety program to positively reinforce safe work behavior in order to improve overall safety culture.

ABC Company believes that healthy safety culture is the foundation that a strong Health and Safety performance requires.

Goals

The establishment of a process to monitor and improve safe work behaviour. Standardize forms and tools used in the process Increased health and safety performance through improved safety culture

Objectives

- Develop observation methods to monitor behavior at all levels of the organization.
- Encourage involvement of all workplace parties
- Develop feedback mechanisms to positively reinforce positive safe work behaviour.
- Establishment of a regular identified hazards communication schedule.
- Encouragement of health and safety performance.
- Improved top management involvement in health and safety matters.

Definitions

Behavior: Any directly measurable thing that a person does, including speaking, acting, and performing physical functions.

Roles and Responsibilities

Top Management

- Set behavior based program goals annually.
- Establish a schedule and action plan for each goal to be achieved, incorporating resources available, responsible parties and target dates (Complete attached form).
- Hold goal behavior based safety program progress report meetings on a 3 monthly basis.
- Review behavior based program statistics on an ongoing basis to identify any trends to ensure continuous improvement(complete review record form).
- Review all health and safety culture measurement reports on annual basis to identify any problem areas and sign the appropriate forms.

- Regularly encourage health and safety performance by positive reinforcement (acknowledges good health and safety performance).
- Comply with all roles and responsibilities bestowed on them.

Department Heads/Supervisors
- Participate in behavior based safety training as provided by top management.
- Organize unique working groups based on job task activity and or shift
- Pinpoint and list desired safe behavior that will be observed
- Complete regular observations for their departments.
- Provide top management with required information and statistics for health and safety reviews.
- Update the team scoreboards at the end of each day
- Communicate behavior based information on a regular basis as per Communication Policy. Health and safety information includes aspects such as
- Leading teams
- Leading individuals
- Identified positive trends
- Regularly encourage health and safety performance by positive reinforcement (acknowledges good health and safety performance). This must be documented on the employees' personal files and feedback should be given during performance appraisals.
- Comply with all roles and responsibilities bestowed on them.

Employees
- Participate in all aspects of the behavior based safety program.
- Provide any relevant information to management in order for them to establish and monitor the effectiveness of the behavior based safety program. (Example: completing daily observation reports).
- Encourage co-employees to develop safe work habits.
- Report deviations from the set safe work procedure to their Supervisor
- Comply with all roles and responsibilities bestowed on them.

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CEO Name: Date:
Chief Executive Officer
ABC Company

Procedure to Improve Safety Culture through Behavior Based Safety

Appendix L: Sample Behaviour Based Safety Program

Functional teams

Each department head is to divide his department into functional teams. These teams will act as units and will have a distinct identity. These teams will be monitored and scored on their observed behavior. The scores will be displayed on the provided team score sheets. Supervisors are responsible for ensuring that the score posters are updated at the end of each shift.

Five Steps to Improve Behaviour

The team with the top score of at the end of quarterly cycles, will be rewarded with an extra paid vacation day. These days can be taken on an individual basis.

ABC Company has adopted the following steps to ensure continuous improvement in safety culture:

1. Identifying the desired behaviour to change

   Review existing accident records, near miss reports, standard or safe working procedures and completed risk assessments to identify the behavior that needs to improve. Once the behavior has been identified, clear expectations must be set that can be observed and measured. All observers must be trained in the overall process and program goals as well as the correct behavior that needs to take place. Not more than six behaviours should be monitored, by an observer and any given time.

2. Establishing data (record)

   Observers must first establish a baseline of behaviour. This should be done over a period of four weeks. To capture the safety performance indicators observers must use three basic classifications: safe, unsafe, and unseen. Safe points are awarded when team members work safely. Unsafe points are awarded when the members of team are not working safely and unseen points are awarded when a safe act is committed but not observed.

   For the purposes of overall calculation the unseen scoring is ignored, the unseen can be used at a later time for developing new safety performance indicators. To gain a total score, the number of safe acts and unsafe acts are added together. The result of the total safe is divided by the total number of safe acts and unsafe acts. This result is multiplied by 100 to achieve a total percentage.

$$\% \text{ Safe Acts} = \frac{\text{Total Safe Acts} \times 100}{\text{Total Safe Acts} + \text{Total Unsafe Acts}}$$

These achieved percentages are then used to set quarterly goals. These results and goals must be reported to senior management.

3. Reinforcement of new behaviour
   ABC Company has adopted a multiple strategy in this regard. Methods include:
   - Focused goals and accomplishments
   - Mutual interest
   - Personal interest
   - Clear communication
   - Positive reinforcement – focus on encouraging positive behavior, not on disciplining the negative behaviours.

4. Evaluation of program effectiveness
The evaluation process is conducted concurrently with the positive reinforcement and recognition process. Each team should have weekly meetings to discuss findings of the observers to ensure constant and continuous improvement. This discussion should be focused on their behaviours. The discussion meeting agenda will include at a minimum:
   - The prior week percentage increase or decrease of the safety performance indicator score
   - The top three improving items
   - The top three decreasing behaviours
   - The average safe percentage score
   - Coaching is important to redirect efforts to stay focused on the improvement goals.
   - The minutes of these meeting must be forwarded to top management on a quarterly basis to track improvement/deviations.

5. Program review
Top management will review the program progress on a quarterly basis to ensure efforts are on track to reach the overall program goals.

Appendix L: Sample Behaviour Based Safety Program

Goal	Target Date	Responsible Person/s	Required Resources	Date Completed

Approved by:

_____ _____ _____ _____

CEO Name: Date: Follow Up date: Chief Executive Officer
ABC Company

Behaviour Based Safety Program
Performance Review

Source	Non-Compliance/ Concerns	Action Required	Responsible Person(s)	Target Date
Supervisor observations completed properly and on time				
Employee observations completed properly and on time				
Positive feedback provided on time				
Team scoreboards up to date (supervisor reports)				
Other concerns tabled				

Notes:

Approved by:

CEO Name:	Date:	Follow Up date:	Chief Executive Officer

ABC CompanyQuarter 1	Quarter 2	Quarter 3	Quarter 4
Identified behavior 1 Identified behavior 2 Identified behavior 3	Identified behavior 4 Identified behavior 5 Identified behavior 6	Identified behavior 1 Identified behavior 2 Identified behavior 3	Identified behavior 4 Identified behavior 5 Identified behavior 6
Date:	Date:	Date:	Date:

Notes:

Approved by:

CEO Name: ABC Company	Date:	Follow Up date:	Chief Executive Officer

Glossary

Accident An incident or other occurrence which resulted in or had the potential for causing an injury or occupational disease.

Behaviour Manner of behaving or conducting oneself; the action, reaction, or functioning of a system, under normal or specified circumstances.

Behaviour Based Safety The application of science of behaviour change to real world problems.

CEO Refers to Chief Executive Officer, or other Senior Executives, Directors

Community Culture A group of interacting people that often refers to shared common values and attribute to social cohesion within a shared geographical location.

Directive Mind A person must have so much authority in the corporation that the person can be considered the "alter ego" or "soul" of the corporation

Due Diligence The care that a reasonable person exercises under the circumstances to avoid harm to other persons or their property.

Employee Perception A process by which individuals organize and interpret their sensory impressions in order to give meaning to their environment.

Employer Under Part 1 of the WCA, an "employer" is any person who has one or more persons working for them in or about an industry, through either a hiring contract or an apprenticeship contract. The contract can be written or oral, express or implied.

Hazard Any condition or practice that may harm people or damage equipment, materials, or the environment.

Hazard Burden The scale, nature and distribution of hazards created by the organisations activities.

Health and Safety Management System A proactive approach to health and safety management of risks and hazards.

Incident An event that could or does result in unintended harm or damage.

Informedness The level of knowledge, understanding, internalizing and relevant skills associated with a specific topic.

Inherent Risk Levels The level of inherent risk that an activity would pose if no controls or other mitigating factors were in place (the gross risk or risk before controls).

IM/RTW

Injury Rate The number of claims per 100 person-years of employment. (One person-year is the equivalent of one person working all year on either a part-time or full-time basis.) The claim count includes injuries that occurred in a given year and were accepted for short-term disability, long-term disability, or survivor benefits in that year or in the first three months of the following year. Self-insured employers are not included in the calculation.

JHSC Joint Health and Safety Committee, this committee is comprised of an equal number of worker and employer representatives

Lost Time Injury A claim for an injured worker who has lost time from work. Also known as a wage loss claim, lost time claim or a Temporary total disability claim.

Management, Leadership and Commitment The overall commitment to occupational health and safety demonstrated by senior management.

Observer Person who observes and records behaviours.

OHS

OHS compliance levels The level of compliance to OHS laws and regulations an organization achieves

OHS performance levels The measurement of OHS goals established by an organization

OHSR Occupational Health and Safety Regulation BC

Organizational Culture A pattern of shared basic assumptions invented, discovered, or developed by a given group as it learns to cope with its problems of external adaptation and internal integration.

Physical Environment The external surrounding and conditions in which something exists.

Premium   The dollar amount an employer pays for WorkSafeBC insurance.

Risk Chance of loss or gain. Also, a measure of potential loss that considers both the magnitude of a loss and its likelihood of occurring.

Safety Culture The way in which safety is managed in the workplace, and often reflects "the attitudes, beliefs, perceptions and values that employees share in relation to safety.

Safety Culture Profile The evidence of a dynamic, reciprocal relationship between psychological, behavioural and situational factors.

Safety Performance   A set of indicators designed to monitor safety performance.

Short-term Disability Claim A claim from an injured worker who has lost time from work. Also known as Wage-loss claim, Lost time claim, or Temporary total disability claim.

Subsector An industrial grouping, such as agriculture, in WorkSafeBC's current classification system. The system groups B.C. industries into sectors, subsectors, and classification units. There are 24 subsectors.

Supervisor

OHSR, Part 1 Definitions   means a person who instructs, directs and controls workers in the performance of their duties

SWP   No Definition

WCA   Workers Compensation [RSBC 1996] Chapter 492

WCB/WorkSafeBC Workers Compensation Board of British Columbia doing business as WorkSafeBC

Worker   A worker is an individual who performs work under a contract with an employer and has no business existence under the contract independent of the employer.

Workers Compensation A form of no-fault accident and injury insurance system. The origin and fundamental value of workers' compensation rests on the principle of mutual protection arising

from the historic compromise in which workers relinquished their right to sue their employer and employers agreed to fund a no-fault insurance system.

Workplace Morale   Emotional or mental condition with respect to cheerfulness, confidence, zeal, etc. in the workplace.

manufacturing
Safety Alliance of BC

About us

The Manufacturing Safety Alliance of BC, formerly known as FIOSA-MIOSA Safety Alliance of BC, was established in December 2007 to reduce the high injury rate in the food and manufacturing industries.

Our mission
We are catalysts for improving workplace health and safety within the BC Manufacturing Industry. Our leading edge health and safety programs, services and tools enable companies to make a difference in the lives of their employees – every day.

Our vision
Partnering with BC's industry leaders to achieve cultural change that ensures safe workplaces for all employees. The Manufacturing Safety Alliance of BC strives to accomplish our mission and vision through the delivery of a variety of core services including:

• Training in areas such as occupational health and safety (OHS) leadership, program building, and auditing.
• Consultation and advisory services.
• The certifying partner for the Occupational Safety Standard of Excellence (OSSE) in partnership with WorkSafeBC.

For more information please contact us: