Technical Support Group
Staffing Services Ltd.

SAFETY PROGRAM

ORIENTATION HANDBOOK

Revised November 5, 2018

Technical Support Group
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TSG

SAFETY POLICY STATEMENT

TSG (TSG) is committed to protect the health and safety of its employees, contractors, client companies, the general public, its property and the environment from accidental or deliberate loss caused by injury or accidents.

In fulfilling this commitment, TSG will comply with all applicable municipal, provincial and federal legislation to the best of its ability.

Management will, through demonstrated leadership and commitment, be dedicated to the maintenance of a safe and healthy work environment through supporting the efforts of our employees, contractors and client companies to achieve this goal.

ALL employees and contractors of TSG will be expected to work in compliance with the policies outlined in this manual. All employees are representatives of their respected companies and shall conduct themselves in a professional manner inside and outside business hours. All Client and Work Site Safety Programs will take precedence and shall be followed as per the client or work site specifications.

We expect excellence in health and safety performance, active participation of all employees and contractors and strict adherence to the rules set forth by all Safety Programs.

AN ACCIDENT-FREE WORKPLACE IS OUR GOAL

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GUIDING PRINCIPLES

TSG fulfills this policy commitment through the application of a comprehensive safety and loss management program that provides all stakeholders with ongoing assurance that:

- Identifiable safety, health and environmental risks associated with TSG business operations are assessed and successfully managed;

- Each new employee or contractor receives an indoctrination to their job on all aspects of safety before being permitted to work;

- Each employee or contractor has had an initial review of all the rules, regulations and procedures related to their job;

- Any unsafe practice or substandard conditions are reported to a TSG representative and a client site supervisor and is immediately recorded and followed up promptly;

- Each employee attends regular meetings where safety is an agenda item that has been properly planned and presented;

- Every incident resulting in personnel injury or property damage is reported to the TSG representative and the client site supervisor immediately and properly investigated;

- All employees or contractors are required to have the appropriate personnel protective equipment as per specific site requirements, trained in the proper use and care of, and motivated to wear it, as prescribed, at all times;

- Appropriate policies, programs and procedures are in place;

- Organizational responsibilities are clearly defined, understood and carried out and every employee is responsible and accountable for their company's performance;

- Safety, health and environmental laws, regulations and permit requirements are adhered to.

- Systems are in place to ensure that safety policies, standards and procedures are being followed and that performance is measured against the best in the industry.

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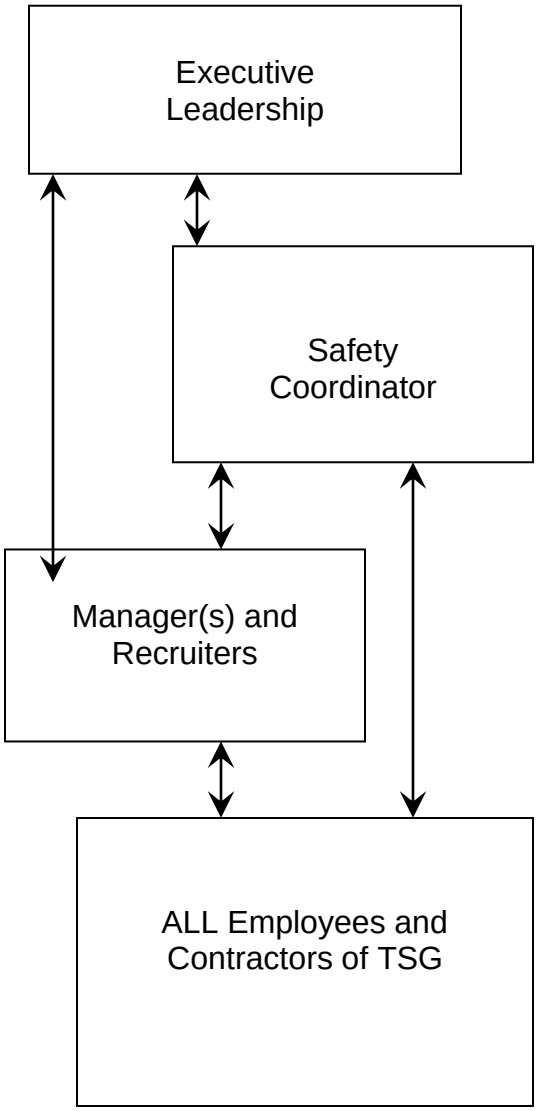
SAFETY RESPONSIBILITIES

The roles and responsibilities for Safety are summarized in the following diagram. Excellence in safety performance is everyone's responsibility. All employees and contractors must adopt and encourage safe work practices and conduct all work-related activities in an environmentally responsible manner. Leadership within TSG is accountable for the organization's safety performance, and for achieving satisfactory performance from employees and contractors assigned to the Client's work site.



- Statement of Policy relating to Safety
- Leadership and Commitment
- Overall Performance
- Provision of appropriate resources

- Resource within company for safety related issues
- Safety Management systems
- Monitoring of Performance
- Safety Program management

- Provision of training and procedures
- Compliance with Standards and Regulations
- Investigation of incidents and follow-up action

- Read, understand and comply with safety program
- Communication of hazards and incidents
- Protect the safety of others and himself / herself

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TO ALL EMPLOYEES AND CONTRACTORS

Following safety practices and procedures is the responsibility of ALL employees and contractors/subcontractors of TSG.

TSG recognizes its leadership role in influencing work site situations and in promoting safety, health and environmental awareness, and we need your commitment to make it work.

Activities with TSG facilities and on Client's work site will be conducted on the principle that "ALL INJURIES AND DAMAGE TO PROPERTY AND THE ENVIRONMENT CAN BE PREVENTED".

Under no circumstances shall the health and safety of the worker, or the environment be sacrificed for reduced cost or by attempting to complete a task in a shorter length of time.

In the event that TSG contractors require site specific safety or emergency training/certificates such as First Aid, TSG will facilitate this through a credited/approved training agency/facility that meets the client's requirements. For some sites you may be exposed to Hydrogen Sulfide (H2S) and may require H2S training and a complete understanding of its Codes of Practice and dangers of exposure.

LEGISLATIVE COMPLIANCE

The TSG policies and procedures have been developed in compliance with Occupational Health and Safety Legislation and Workers' Compensation Board.

Compliance with legislation is stressed and included in TSG's orientation program.

ALL employees and contractors of TSG must accept responsibility to comply.

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OCCUPATIONAL HEALTH AND SAFETY

Occupational Health and Safety (OH&S) Act

The Occupational Health and Safety Act was created to help protect workers from risk of injury at work. As different people have different ideas as to what is safe, the Act defines basic safety standards for everyone, and provides for enforcement of those standards.

Section 2 (1) is a most important section for the employer.

It states:

2 (1) every employer shall ensure, as far as is reasonably practicable for him to do so,

(a) The health and safety of
    i. Workers engaged in the work of that employer, and
    ii. Those workers not engaged in the work of that employer but present at the work site at which that work is being carried out, and

(b) That the workers engaged in the work of that employer are aware of their responsibilities and duties under this Act and the regulations.

Section 2 (2) is directed at you, the worker; it says you must protect yourself and others on the job site. It also requires you to cooperate with your employer in protecting yourself and the health and safety of other workers on the site. It states:

2 (2) every worker shall, while engaged in an occupation,
(a) take reasonable care to protect the health and safety of himself and of other workers present while he is working, and
(b) co-operate with the worker's employer for the purpose of protecting the health and safety of
    i. the worker
    ii. other workers engaged in the work of the employer, and
    iii. other workers not engaged in the work of that employer but present at the work site at which that work is being carried out

Section 35 states that you have the right to refuse work if you believe imminent danger exists. You need to discuss your concerns with your employer and provide reasons why you refused. It states:

35 (1) No worker shall

(a) Carry out any work if, on reasonable and probably grounds, he believes that there exists an imminent danger to the health and safety of that worker,

(b) Carry out any work if, on reasonable and probably grounds, he believes that it will cause to exist an imminent danger to the health and safety of that worker or another worker present at the work site, or

(c) Operate any tool, appliance or equipment if, on reasonable and probably grounds, he believes that it will cause to exist an imminent danger to the health or safety of that worker or another worker present at the work site.

35 (2) in this section, "imminent danger" means in relation to any occupation

(a) A danger that is not normal for the occupation, or

(b) A danger under which a person engaged in that occupation would not normally carry out his work.

35 (3) A worker who refuses to carry out, or refuses to operate a tool, appliance or equipment pursuant to subsection (1) shall, as soon as practicable, notify his employer at the work site of his refusal and the reason for his refusal.

Section 36 states that nobody can take disciplinary action against you if you are following the act and regulations. It states:

(a) No person shall dismiss or take any other disciplinary action against a worker by reason of that worker acting in compliance with this Act, the regulations, the adopted code, or an order given under this Act, the regulations or the adopted code.

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GENERAL SAFETY REGULATION / FIT FOR DUTY

TSG/Client Responsibilities:

- TSG and the client have mutually agreed upon the date that the new employee/contractor is to begin, and on an ongoing basis, when the worker will be on the client site.
- The client or TSG will direct and communicate to the employee the appropriate orientation courses, training procedures, safety guidelines, fit for duty practices and all other procedures required as per the client and the work site location, and will monitor compliance with HSE policies and procedures. Where neededsub, an experienced/knowledgeable employee will mentor the new worker.
- Client site rules and regulations will be communicated at orientation and on site. These rules will take precedence.
- The work site hazards will be identified and communicated.
- The appropriate personal protective equipment (PPE) and training in its use will be available.
- Safe work procedures must be available for reference at the work site.
- As per site regulations codes of practice for the use and selection of Respiratory Protective Equipment (RPE) and for working in confined spaces. Training to follow these codes will be provided when required.
- If it is determined an employee or contractor is unable to perform a task required, the appropriate steps will be taken to completed the task; (1) other qualified staff will temporarily be assigned to complete the task. If it is then determined an employee or contractor is unable to perform his duties additional steps will be taken; (2) provide assistance to the overcome the problem, (3) transfer the employee to a new role or (4) provide a leave of absence until the employee is fit for duty.

Worker Responsibilities:

- It is your responsibility as a worker to follow the safe work procedures established by your employer or site specific programs & regulations.
- It is up to you to comply with all appropriate regulations after being informed and trained by your employer or client.
- You must report any hazardous or potentially hazardous situations to your supervisor.
- Injuries or illnesses must be reported immediately or as soon as possible.
- You must participate in health and safety training.
- You must be competent and qualified for the job required, if not report the task to a supervisor and help will be supplied.
- You must be physically capable to do job required, if not report the task to a supervisor and help will be supplied.
- It is your responsibility to wear the required personal protective equipment.
- One of your important responsibilities as a worker is to inspect all equipment and machinery before use. Defective equipment, including PPE, is not to be used and must be reported to the supervisor.
- Make sure you know the location, type and operation of emergency equipment at the work site.
- It is in your best interest to ask questions about your job, work procedures and safety concerns and to identify the emergency resources available to you.

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IF YOU DON'T KNOW . . . . . ASK!

GENERAL SAFETY RULES

ALL accidents, incidents, injuries or "near misses", regardless of their nature, shall be promptly reported to the TSG representative and the client site supervisor.

- Approved Personnel Protective Equipment shall be worn where required on the job by all personnel.

- Smoking is permitted only in designated areas that are appropriately ventilated while on client's work site and subject to the client's rules. Details of the location of such areas may be obtained from the designated client contact.

- TSG offices are designated non-smoking areas.

- ALL employees and contractors shall complete an "Employee Orientation" prior to commencement of work.

- Hand tools shall not be used for any purpose other than that intended. All damaged or worn parts shall promptly be repaired or replaced.

- Only persons who have been instructed or trained in their safe use shall operate power tools and/or explosive activated tools. Guards furnished by the manufacturer must be "in place" during the use of the tool.

- No employee or contractor shall report to work or be at work with an alcohol level that exceeds 0.040 grams per 210 liters of breath or in the possession of alcoholic beverages or unauthorized drugs while on clients' work site or facilities under the care and control of TSG.

- NO employee or contractor shall engage in horseplay, fighting, gambling, or possess firearms on a client's work site or facility under the care and control of TSG Violation will constitute ground for immediate dismissal. These are considered illegal or acts of violence and should be reported immediately. One should contact a Health and Wellness professional for an assessment if exposed to these acts.

- All employees or contractors working in facilities containing hydrocarbons will wear approved fire retardant clothing.

- Only authorized personnel with the appropriate individual protective equipment and fire suppression equipment shall carry out work requiring the use of open flame tools or welding tools.

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ALCOHOL AND DRUG POLICY

TSG is committed to maintaining a safe work place for its employees and contractors and ensuring that Clients are provided with contractors knowledgeable in the risk of using alcohol and drugs. This policy is endorsed by senior management, and extends specifically to the consumption of alcohol and drugs and their effects on an individual's ability to safely perform their duties at work.

TSG Alcohol and Drug policy consists of 3 parts:

1. A TSG policy for all employees and contractors of TSG, for use in facilities under the care and control of Clients when the Client has no policy of their own.

2. A commitment to have specific Client policies override TSG's policy when Clients have their own policy, and our employees or contractors are assigned to the Clients' worksite.

3. A procedure for testing employees and contractors of TSG when an individual's supervisor or manager believes, on reasonable grounds, that they may be in breach of the standards concerning the TSG Alcohol and Drug Policy.

The drug and alcohol policy builds awareness of how drug and alcohol use adversely affects the ability of a person to work in a safe manner. TSG's employees and contractors work in various situations on a Client work site that may pose a threat to their safety and the safety of their co-workers if not handled with care and attention. By implementing and adhering to this policy, TSG promotes:

- the safety and dignity of our employees and contractors.
- the welfare of our employees and contractors and their families.
- the best interests of the company, customers, and the public.

ROLES AND RESPONSIBILITIES

The successful implementation of this Drug and Alcohol policy is the shared responsibility of the Client, management, employees and contractors.

TSG and Client supervisors:

- Provide a safe workplace.
- Emphasize awareness, education, and training with respect to the use of drugs and alcohol and the recognition of impairment and appropriate response procedures.
- Receive training on the recognition of impairment and procedures to follow when an employee is suspected of being impaired or having a substance abuse problem
- Ensure effective employee and contractor assistance services are available to workers.
- Actively support and encourage rehabilitation activities and re-employment opportunities where applicable.
- Ensure that all employees and contractors understand the existence of and content of the drug and alcohol policy during sign up.

- Ensure that the alcohol and drug testing is performed according to the standards set out in the drug and alcohol policy.
- Make any reasonable inquiries in regards to a worker's potential drug or alcohol dependency or use.
- Comply with work standards and perform their work-related activities in an effective and safe manner.
- Take action on performance deviations.
- Ensure the respect of the dignity and privacy of the employee or prospective employee that may be the subject of this drug and alcohol policy.

Some positions are identified as being Safety-Sensitive. In an instance in which it is determined that the worker is in or is being transferred to a position that has been identified as Safety-Sensitive and/or a site designated as requiring Site Access training, a drug and/or alcohol test will be completed.

Employees and Contractors must:

- Have an understanding of the drug and alcohol policy.
- Take responsibility to ensure their own safety and the safety of others.
- Ensure they comply with work standards as part of their commitment to perform work activities in a safe manner.
- Comply with the work rules and follow appropriate treatment if deemed necessary.

WORK STANDARDS

- No employee or contractor shall distribute, possess, consume or use alcohol, cannabis or other drugs on any TSG or Client worksite or in any vehicle or other equipment.
- No employee or contractor shall report to work or be at work with an alcohol level that exceeds 0.040 grams per 210 liters of breath.
- No employee or contractor shall report to work or be at work with detectable levels of any drug, including cannabis, in their body.
- Any prescription or over-the-counter medication that may impair performance or the ability to work safely must be reported to a manager.
- For further information, contact the client’s HR department, your manager or a TSG representative.

DRUG AND ALCOHOL WORK RULES

Employees and contractors shall not:

- Be in possession of, use, or offer for sale alcohol, cannabis or other drugs, or drug paraphernalia on any company or Client worksites or tamper with any sample for a drug and alcohol test while on Client property or at a Client worksite.

- Report to work or work with an alcohol level equal to or greater than 0.040 grams per 210 liters of breath, or with a drug level equal to, or greater than the concentrations set out in Table 1.0 of this policy.

Table 1.0

Substance Tested	Urine Screening (ng/mL)	Urine Confirmation (ng/mL)	Oral Fluid Screening (ng/mL)	Oral Fluid Confirmation (ng/mL)
Cannabinoids	50	15	4	2
Cocaine	150	100	20	8
Opiates	2000	2000	40	40
PCP	25	25	10	10
Amphetamines	500	250	50	25
Methamphetamine	500	250	50	25
Methadone	300	200	60	60
MDMA (Ecstasy)	500	250	50	25
Propoxyphene	300	300	N/A	N/A
Barbiturates	300	200	10	10
Benzodiazepines	300	50	N/A	N/A
Oxycodone	100	100	N/A	N/A
Breath Alcohol Testing	**g/L of breath**			
Alcohol	0.040/210			

* Testing concentrations are derived from SAMHSA guidelines for testing federal employees/contractors, and may be adjusted from time to time without being updated in this policy as SAMHSA adjusts their testing limits.

- Report for duty, or remain on duty when using any drug, except when the use is pursuant to the instructions of a licensed medical practitioner who has advised the employee or contractor that the substance will not adversely affect their ability to safely work at the job site.

- Misuse prescription medications or over-the-counter medications in such a manner as to render themselves unfit to safely perform their work. The employee and contractor must be aware of any side effects that could impact his/her performance and must consult with a physician, nurse or pharmacist where necessary.

- Refuse to submit to a required alcohol or drug test, including a post-accident, reasonable suspicion, random, pre-access, return-to-duty, or follow-up drug or alcohol test.

Management shall not:

- Permit an employee or contractor to perform or continue to perform their duties if they have actual knowledge the employee or contractor is using alcohol / drugs or has reasonable cause to believe the employee or contractor is impaired while performing the duties of their position.

- Permit an employee or contractor who refuses to submit to a post-accident, reasonable suspicion, return-to-duty, or a follow-up drug test to perform or continue to perform the duties of their position.

IMPLEMENTATION OF THE DRUG AND ALCOHOL POLICY

Education:

- TSG is committed to informing employees and contractors of the existence of this drug and alcohol policy and to taking such other steps as are reasonable to inform its employees and contractors of the safety risks associated with the use of drugs and alcohol.

- The likelihood that an employee and contractor will comply with the Drug and Alcohol Work Rules is increased if he/she knows the safety risks associated with the use of drugs and alcohol and that assistance can be provided by Substance Abuse Experts (SAEs).

Self Help:

This drug and alcohol policy encourages employees and contractors who believe that they may require the help provided by Substance Abuse Experts (SAEs) to voluntarily request that help. If an addiction problem exists, employees will be accommodated. In any event, each matter will be investigated.

An employee or contractor who believes that he/she may be unable to comply with the Drug and Alcohol Work Rules should seek help by:

- contacting an SAE or service such as Alberta Health Services (AHS) at 1-866-332-2322 (Help Line), or

- contacting Human Resources at your Client worksite or your TSG representative, or

- informing a family member or friend and asking for assistance, or

- informing a co-worker or manager.

TESTING OPTIONS

<u>Pre-Employment Testing:</u>

1) Post-Offer Pre-Employment
   - If the employee or contractor has a positive test result, the company may revoke its offer of employment.

2) Pre-Access
   - An employee or contractor may be required to submit to a drug and/or alcohol test to gain access to a Client worksite as required by the owner or Client.

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Employment Testing in Situations Involving Reasonable Cause, Incidents or Near Misses, or Post-Treatment

Drug and alcohol testing is performed during the term of employment in the following situations:

1) Reasonable Cause

Where there is reasonable cause to believe the employee or contractor may be impaired, testing will be requested. Reasonable cause may arise in the following circumstances:

- In possession of drugs and/or alcohol on a Client worksite

- Observation of employee or contractor in violation of the Client worksite Drug and Alcohol Policy

2) Incidents and Near Misses

- A manager of an employee or contractor may request a drug and/or alcohol test if the manager has reasonable grounds to believe that an employee or contractor was involved in any incident or near miss where there is reasonable cause to suspect impairment on the job.

- A manager of an employee or contractor must provide a reason for the request.

- A manager must make a request for testing immediately following an incident or near miss, unless it is not practicable or reasonable to do so until a later time.

- A manager of an employee or contractor need not request a drug and/or alcohol test if the manager concludes that the incident was a result of mechanical failure or environmental factors.

DRUG AND ALCOHOL ANALYSIS

Drug and alcohol testing is conducted to determine if drugs listed in Table 1.0 are present in a specimen, or if alcohol is present in a specimen provided by the employee or contractor. The procedure is as follows:

- Alcohol testing will be provided by an approved Evidential Breath Testing device and alcohol breath tests will be performed by an approved Breath Alcohol Technician.

- The laboratory selected meets guidelines and standards of the Department of Health and Human Services which is the certifying agency for forensic urine drug and alcohol

- testing laboratories in Canada. They will perform the required testing and confirm screening results.

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DRUG AND ALCOHOL TESTING RESULTS

Drug and alcohol test results can be negative, positive, tampered, invalid or inconclusive.

- A negative test result means the employee or contractor is in compliance. A positive test result means non-compliance. A tampered test result means non-compliance. An invalid or inconclusive test result cannot be relied upon to determine compliance or non-compliance. All test results will be provided in a confidential report.

- If the employee or contractor's sample produced a negative test result, no other steps under this drug and alcohol policy will be taken.

- If the employee or contractor's sample produced a positive test result, they failed to comply with the Drug and Alcohol Policy.

- If the employee or contractor's sample has been tampered with, they failed to comply with Drug and Alcohol Policy.

NON COMPLIANCE OF DRUG AND ALCOHOL POLICY

- An employee or contractor who fails to comply with the Drug and Alcohol Policy may be disciplined or terminated for cause. The appropriate consequence depends on the facts of the case, including the nature of violation, the existence of prior violations, the response to prior corrective programs, and the seriousness of the violation.

- An applicant who has a positive test result in a pre-employment test will not be hired as a negative test result is a condition of employment.

- Failure by the employee or contractor to follow the course of corrective or rehabilitative action shall be cause for and will result in termination of employment.

RETURN TO WORK AFTER POSITIVE TEST

An employee or contractor will not return to the duties of their position until he/she has been evaluated by an SAE, complied with recommended rehabilitation, and has a negative test result on a return-to-duty alcohol or drug test. The employee or contractor must provide a written report from the SAE verifying the required evaluation, recommendation, and rehabilitation, or providing a release document for the required information.

CONFIDENTIALITY AND PRIVACY

TSG is dedicated to protecting the personal information of its employees and contractors and prospective employees and contractors. It is acknowledged that the personal information collected in relation to drug

and alcohol testing, as well as medical records for employees, is extremely sensitive and must be protected against unauthorized use, disclosure, access or modification.

TSG may release relevant information to our clients as required, when appropriate.

WORKPLACE VIOLENCE AND HARASSMENT

"Violence", whether at a work site or work-related, means the threatened, attempted or actual conduct of a person that causes or is likely to cause physical or psychological injury or harm, and includes domestic or sexual violence. Acts of violence can take the form of physical contact. Acts of violence destroy individual dignity, lower morale, engender fear, and break down work unit cohesiveness. Acts of violence may occur as a single event or may involve a continuing series of incidents. Violence can victimize both men and women, and may be directed by or towards workers, visitors and members of the public.

"Harassment" means any single incident or repeated incidents of objectionable or unwelcome conduct, comment, bullying or action by a person that the person knows or ought reasonably to know will or would cause offence or humiliation to a worker, or adversely affects the worker's health and safety, and includes: (a) conduct, comment, bullying or action because of race, religious beliefs, colour, physical disability, mental disability, age, ancestry, place of origin, marital status, source of income, family status, gender, gender identity, gender expression and sexual orientation, and (b) a sexual solicitation or advance, but excludes any reasonable conduct of an employer or supervisor in respect of the management of workers or a work site.

TSG is committed to eliminating or, if that is not reasonably practicable, controlling the hazard of workplace violence/harassment. TSG strongly believes in the prevention of violence and promotes a violence-free workplace in which all people respect one another and work together to achieve common goals. Any act of violence committed by or against any worker or member of the public is unacceptable conduct and will not be tolerated. No employee or any other individual affiliated with this organization shall subject any other person to violence. ALL employees and contractors are expected to conduct themselves in a professional, honest and ethical manner while at their work, or while representing TSG at an outside location. ALL employees and contractors of TSG are entitled to a supportive work environment in which individuals are treated with respect, provided with equal treatment and opportunity, and are free of violence/harassment.

In addition to TSG's guideline on working alone (see table of contents), TSG employees and contractors are working at client sites that have specific control measures that are unique to each site. These include restricted access to work areas, locked doors, keycards, security procedures, and emergency response procedures and in some instances also include security cameras and security guards.

Making a complaint - Procedure

Employees and contractors who believe they are themselves being subject to violence and/or harassment or who observe or know of a fellow employee, or group of employees who are being harassed are strongly encouraged to contact their/a Client Site Representative and/or their/a TSG Representative OR whomever they feel comfortable talking to. Employees' access to management in such instances is not limited to their immediate manager/supervisor. ALL complaints of violence and/or harassment will be

taken seriously and will be investigated in a prompt, confidential and impartial manner until they are resolved.

The status or rank of the alleged offender will not have any impact in regards to the assistance available to the victim.

Details of the incident including the date(s) and time(s), nature of the violence and names of any persons who may have witnessed the violence. This documentation is the victim's personal record and property.

After informing the Client Site Representative and/or TSG Representative verbally, filing an official report should be done. The victim's concerns are to be documented, adding the written record to a record of any previous incidents. The written complaint should then be submitted to both a Client Site Representative and a TSG Representative.

It is the responsibility of all persons involved in the processing of a complaint to ensure that the complainant is neither penalized nor subjected to any prejudicial treatment as a result of making the complaint. No correspondence pertaining to a complaint, other than that which is the complainant's personal property, is to be placed in the complainant's personal file.

All events pertaining to the incident will be kept in the strictest confidence. It is the responsibility of any individual who becomes aware of an incident of violence not to disclose details of the incident to any third party without prior consultation with the victim.

Any individual has the right to pursue their concerns through an alternate forum other than those laid out above. This may include, but is not limited to, exercising their rights through any law of Alberta or Canada.

Review of program

The effectiveness of our violence/harassment program will be reviewed on the earliest of the following: (a) when an incident of violence occurs; (b) if the joint work site health and safety committee or the health and safety representative, if applicable, recommends a review of the plan; (c) every 3 years.

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CLIENT WORK SITE ACCESS

Access to our clients' work site is tightly controlled. All workers are issued an "access card". Your "access card" is used only by you and nobody else.

The "access card" is much more than a device that simply lets you in and out of the client's work site. In an emergency, each and every person must be accounted for. That is why it is essential for everyone to use their "access card" when entering and exiting the client's work site.

Should you misplace or forget your "access card" when coming to work or it is lost or stolen, contact your client contact and you may be issued a temporary replacement or new "access card".

RIGHT TO REFUSE – UNSAFE WORK

It is the right of all employees and contractors to refuse to perform work they believe unsafe. Each employee and contractor is encouraged to exercise this right if confronted with a situation or directive that they believe could result in injury to themselves or to a fellow worker.

PLANNING FOR SAFETY

- ✓ **Get ready for the task at hand at hand. Plan the work and work the plan.**

  Example: Ensure that everything is in place prior to doing the work. This means that you should have all the appropriate tools and equipment (including safety equipment) prior to doing the work. Discuss the work and discuss potential hazards in the area.

- ✓ **Get the big picture.**

  Example: Discuss what other hazards or other work could possibly affect me while I perform my task.

- ✓ **Prepare for the unexpected.**

  Example: What do I need to do if the emergency alarm signal activates? (What is my emergency response plan?) Ask "WHAT IF…"

- ✓ **Let others know what you are doing.**

  Example: If people are performing work in your area or you are performing a task, which could affect other workers, you need to communicate with these other workers to avoid a potential hazard that could affect others.

- ✓ **Follow safety rules and regulations.**

  Example: Incorporate applicable rules and regulations into your job planning. If in doubt, ASK your client contact or supervisor.

- ✓ **Be alert for changing and unusual conditions.**

  Example: conditions in your work environment can change without warning (personnel working on equipment, weather conditions turn nasty).

- ✓ **Maintain the job work site in a safe condition at all times and not just when work is completed for the day.**

  Example: Clean up of debris should be ongoing throughout the day. Cords and hoses should be kept clear of traffic areas and checked periodically as the job progresses. Keep the site free of work hazards that can cause slips, trips or falls.

DRIVING TO AND FROM CLIENT AND TSG WORK SITES

TSG and our clients want you to arrive at work safely and return home safely to your family at night:

- Obey all highway and city traffic laws
- Watch for wildlife
- Direct sunlight from sunrise or sunset can impair vision
- Be alert for farm implements on the highway or other slow moving equipment/machinery
- Adjust your speed for road and weather conditions
- Be alert for bicycle riders, joggers and motorcyclists
- Be courteous – BE SAFE!

WORKPLACE HAZARDOUS MATERIAL INFORMATION SYSTEM (WHMIS)

- Have you received WHMIS training? If not, all workers who work with or near hazardous products will have WHMIS training.
- Ensure that you know where Safety Data sheets (SDS), obtained for all hazardous products, are located and how they can be obtained. These are readily available to employees.
- Anyone who acquires a hazardous product for use at a work site must obtain the SDS sheets and insures they are readily accessible as per each site requirement.
- Obtain and read all SDS prior to using a hazardous product (Toolbox Meeting).
- Use the appropriate personal protective equipment as indicated on the SDS.
- All containers must be properly labeled and affixed to their original containers or products. If labels are missing or indecipherable, they must be replaced.
- Any hazardous products that have been transferred from one container to another must be affixed with the proper labels.
- Ensure you know how to properly dispose of any leftover materials and the empty container from which the material came from.

- Safety showers and eyewash stations are located in strategic locations throughout our clients' work site. Ensure you know these locations when working in particular areas of the work site.
- Report all chemical exposures to your client site supervisor and obtain medical treatment if required. Once treatment is completed, report exposure to your TSG representative.

WHMIS Supplier Labels for Hazardous Products

WHMIS supplier labels must be affixed, and provide the following information necessary for handling hazardous products safely.

- Product hazards
- Risk of the product and precautions to take
- Reference to the SDS for more detailed information on ingredients, toxic properties, handling instructions and the use of personal protective equipment.

Hazardous products are materials with any of the hazardous characteristics outlined below. They are divided into six classes and various divisions, and are represented by hazard symbols for easy identification.

Class and Division Description

Class A **Compressed Gases:** any gases or liquefied gases in pressurized containers that boil at or below regular temperatures. Risks include containers rupturing or exploding if heated or damaged, and frostbite from spills of leaks of liquefied gases. Examples include:

- Acetylene (welding)
- Propane (heating)
- Chlorine (water treatment)
- Freon (refrigeration)
- Compressed air
- Some fire extinguishers

Class B **Flammable and Combustible Materials:** materials that may catch fire or explode. Flammable materials will burn readily at room temperature, while combustible materials will burn when heated. Examples are listed below:

Division 1	Flammable gases: propane, hydrogen
Division 2	Flammable liquids: gasoline, barbecue starter
Division 3	Combustible liquid: diesel fuel
Division 4	Flammable solids: magnesium alloys, primer cord for detonating explosives
Division 5	Flammable aerosols: penetrating oil, engine starter fluids
Division 6	Reactive flammable materials: celluloid, metallic sodium

Class C **Oxidizing Materials:** materials that supply oxygen either under normal conditions, when heated, or when reacting with reducing agents such as acid. The oxygen causes or contributes to the burning of other materials. Examples of oxidizing materials include:

- Pure oxygen
- Organic peroxides (bleach)
- Chlorates
- Nitrates and nitrites (explosives)

Class D **Poisonous and Infectious Materials:** materials causing effects ranging from acute to chronic. Examples for each of the three divisions are given below:

Division 1	Acute poisons (i.e. immediately life-threatening in very small amounts); they can be swallowed (strychnine, cyanide), inhaled (hydrogen sulphide, chlorine) or absorbed through the skin (nerve gas).
Division 2	Other poisons with chronic or long-term effects such as cancer, reproductive toxicity, mutagenicity, sensitization and eye or skin irritation. They can be swallowed (saccharin, Citrus Red #2 food colouring), inhaled (asbestos fibres, silicon, solvent vapours) or absorbed through the skin (mercury, herbicides, aromatic solvents).
Division 3	Infectious materials found in hospitals, laboratories, or research facilities. These materials include disease-causing organisms or their toxins, such as viruses, bacteria, fungi, and cultures and specimens of blood, human waste or body tissues

Class E **Corrosive Materials:** materials in liquid, gas or solid form that can severely burn the skin, eyes or tissues of the respiratory tract. They can also eat through metal. Examples of these materials include sulphuric acid, hydrochloric and phosphoric acids, and anhydrous ammonia.

Class F **Dangerously Reactive Materials:** materials that produce heat, pressure, explosion or toxic fumes under increased temperature or pressure, shock or contact with water. These materials include metal azides and acetylides that can explode if struck; some fiberglass repair kits that will polymerize and rupture violently if heated; and alkali metal cyanides that will give off hydrogen cyanide on contact with water.

There are three types of labels:

1. **Supplier labels**, applied by suppliers before the hazardous product is sent to the workplace. These must be affixed to the original container.

2. **Workplace labels**, applied in the workplace to containers without supplier labels (e.g. small containers that have been filled from larger ones). These must be affixed to the container to which hazardous product has been transferred from the original container.

3. **Other identification labels such as placards**, when workplace labels are impractical.

NOTE: All Client and Work Site Safety Programs will take precedence and shall be followed as per the client or work site specifications.
For more details, refer to the Alberta Occupation Health and Safety Act

Technical Support Group
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EMERGENCY RESPONSE

1. Upon arrival at site, perform a check for all potential emergencies by following the guidelines on pages 17 - 23 of this safety manual (Hazard Awareness Assessment, Hazard Awareness Checklist and Hazard Awareness Form).

2. **Emergencies**

   While on site, any individual observing a fire, gas release, chemical spill, medical emergency, hazardous condition, or **ANY** hazardous condition must communicate the situation to an area Emergency Response Team by:

   - Telephoning 911, AND / OR
   - Telephoning client's Emergency Response Number, AND / OR
   - Contacting the client's nearest control room

   Be prepared to give the following information:

   - **WHAT?** (Describe the emergency)
   - **WHERE?** (Exact location)
   - **NAME** of Person calling
   - And **other** pertinent information

3. **Emergency & Evacuation Procedures**

   Follow these emergency guidelines and evacuation procedures for all identified emergencies: (Initial action will be on an emergency type basis)

   *There are various types of site alarms. All personal will be instructed as to their meaning during the site orientations.

   **Safe collection rooms and assembly areas are located throughout the site. Check the locations in your work areas with your job leader, supervisor or client representative.

   a. Follow all warnings and alarms
   b. Go to designated assembly areas
   c. Establish a head count
      i. If employees are missing, give their names and last known locations to the operations coordinator
   d. Follow procedures if further evacuation is instructed
      i. Move to a designated safe areas according to local evacuation plans
      ii. Send employees home
      iii. Send evacuees to shelter
   e. Establish a list of necessary emergency supplies such as water, food and medical supplies
   f. Coordinate a plan with local authorities

4. Typically, the client work site has windsocks. You must note the location of the windsock in your work area and the wind direction in the event of an emergency.

Typical Client emergency signals are:

ALERT: All work stops
All non-designated personnel in the process, move by safest route to an assembly area
All vehicles must be shut down
In effect until all clear is sounded

EVACUATE: All non-essential personnel will remain assembled in their assembly area until directed by the Emergency Coordinator

ALL CLEAR: Return to work and resume duties

All work permits must be revalidated.

JOB OBSERVATIONS

Formal job observations may be conducted, where workers conduct observations of work activities to identify safe and/or unsafe behaviors and actions. If required, corrective measures are implemented to prevent incidents (e.g. injury or loss) from occurring. The main objectives of this program are:

- Injury and loss prevention
- Increased safety awareness
- Fostering a positive workplace safety culture
- Recognizing workers for their safe actions

Employees who conduct job observations will be trained to do so. When a safety observation is conducted, the workers being observed will be informed, and will actively participate in the process.

When the safety observation is complete, a two-way conversation will take place between the observer and the observed, to discuss the findings and any corrective measures. Safety observations shall be reported, recorded and tracked over time to identify trends or issues.

FATIGUE MANAGEMENT

Employees must provide advanced notice of excessive fatigue to their supervisor, and the supervisor must assess the nature and potential causes of the fatigue and take suitable actions where practicable (i.e. workplace modifications if so-identified). Employees must never operate motor vehicles and/or heavy equipment when excessively fatigued.

What is fatigue?

Fatigue is more than feeling tired and drowsy. In a work context, fatigue is a state of mental and/or physical exhaustion that reduces a person's ability to perform work safely and effectively. It can occur because of prolonged mental or physical activity, sleep loss and/or disruption of the internal body clock. Fatigue can be caused by factors that may be work related, non-work related or a combination of both and can accumulate over time.

Why is fatigue a problem?

Fatigue can adversely affect safety at the workplace. Fatigue reduces alertness, and may lead to errors and an increase in incidents and injuries, particularly when:

- operating equipment or vehicles
- undertaking critical tasks that require a high level of concentration
- undertaking night or shift work when a person would ordinarily be sleeping.

Signs / symptoms that may indicate a worker is fatigued

- Excessive yawning or falling asleep at work; the worker looks drowsy
- Short term memory problems and an inability to concentrate
- Noticeably reduced capacity to engage in effective interpersonal communication
- Impaired decision-making and judgement
- Reduced hand-eye coordination or slow reflexes
- Other changes in behavior (e.g. chronically arriving late for work or increased rates of unplanned absences

Steps to reduce worker fatigue

- Work schedules should be managed to limit work hours and to control job rotation schedules
- Days consecutively worked should not be excessive.
- Workers must take periodic and adequate breaks to increase mental acuity and minimize fatigue.

Additional considerations:

- Extended travel time to and from the worksite
- Excessive physical effort required as part of normal work activity
- Emphasis on the need for adequate and restful sleep
- Environmental extremes (e.g. heat, cold, noise, vibration, lighting)
-

FIRE EXTINGUISHER PROGRAM

Purpose:

The Fire extinguisher Prevention program is intended to provide compliance with all related regulation and standard safe work practice. The purpose of the policy is to prevent fires and to provide guidelines for action in the event that a fire does occur.

Policy:

The employees shall be informed of the proper actions to take in the event of a fire. This includes, but is not limited to; notification and evacuation procedures. It is STRESSED that at no time does the task of fighting fire supersede an employee's primary duties of:

- Ensuring their own personal safety and the safety of others.
- Reporting the incident to the proper authority and ensuring personnel accountability for yourself and all subordinates at the jobsite, in accordance with company and client policy.

Procedure:

- The employees are responsible for good housekeeping practices to enhance fire prevention methods. Supervisors will be held accountable for the housekeeping of their job sites.

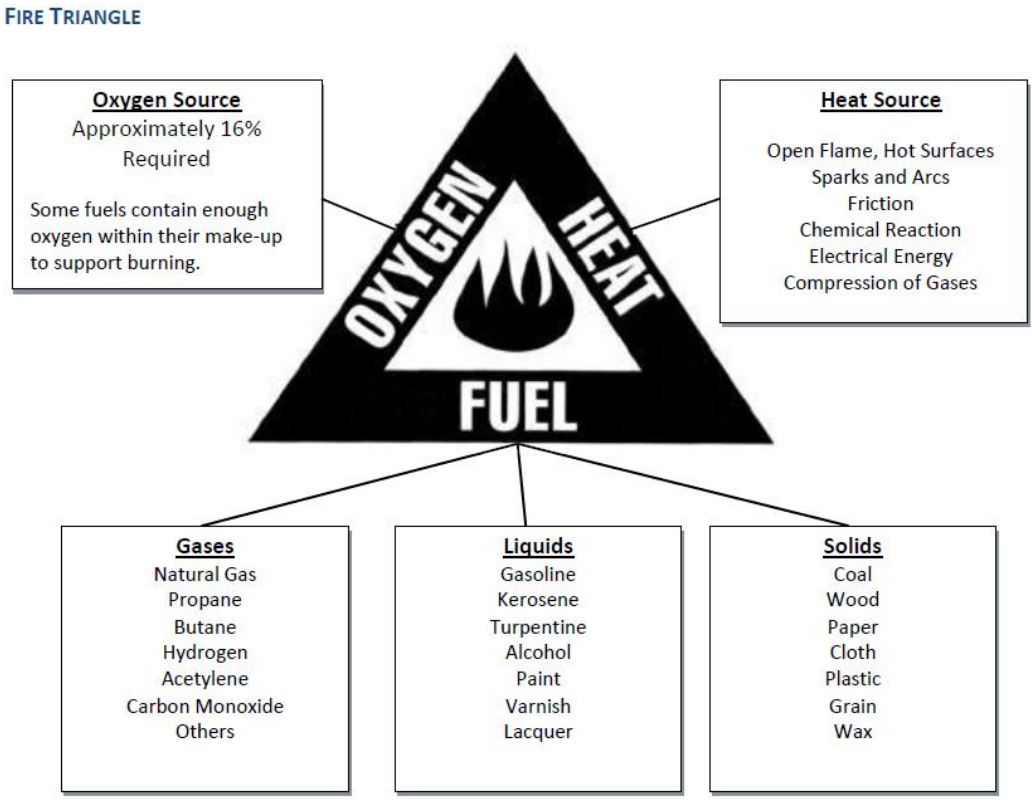
IN THE EVENT OF A FIRE:

- Remain calm
- Only extinguish a fire when it is clearly within your abilities and the equipment available
- Know the location of the nearest alarm and how to activate the emergency system
- Know the evacuation routes and collection points
- If the fire cannot be extinguished, leave the area immediately and report to your evacuation area
- Await further instructions from the designated responsible personnel

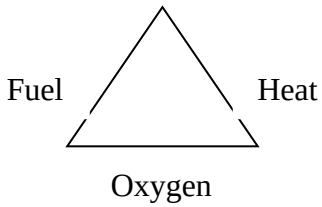
Watch for Fire Re-Starting

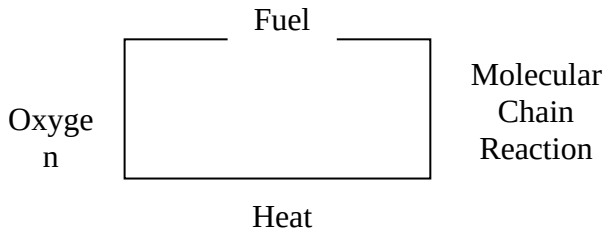
BASIC FIRE SCIENCE:

Fire is a chemical reaction which needs three things to be present: Oxygen + Fuel + Heat = Fire
If one of these three things are not present, the fire cannot start.
If one of these three things are taken away the fire will go out.



To understand fire better, a fourth factor is added, a molecular chain reaction. This is due to the fact that fire results from a series of reactions in which complicated molecules "crack" into easily oxidized fragments. Disruption of this chain, along with the removal of fuel, heat or oxygen, is recognized as a method of fire extinguishment through the use of dry chemical extinguishers.





- **Heat Energy** - Can be produced by building up molecules (composition) or breaking apart (decomposition) by heat or a solution when materials are dissolved in a liquid, or by combustion.
- **Heat Transfer** - A law of physics states that heat tends to flow up from a hot substance or place to a cold substance or place. This is through conduction (transfer of heat through a medium such as metals) or through convection (transfer of heat with a medium-usually circulatory).
- **Fuels** - Those substances that will burn when heat is applied. The most common fuels are not pure elements such as carbon, but compounds and mixtures such as paper and wood.
- **Oxygen** - Makes up a major portion of the oceans and earth's crust and one-fifth of our atmosphere. Atmospheric oxygen is the major source of oxygen that supports combustion. Oxygen itself does not burn, however, without it, combustion is impossible. Normal burning is the combination of fuels with oxygen under the influence of heat.
- **Combustion** - A rapid oxidation or chemical combination accompanied by heat.
- **Oxidation** - The ability of materials to produce oxygen during a chemical reaction.
- **Spontaneous Combustion** - When oxidation is allowed to occur, enough oxygen is available, heat is produced, molecules become more energetic and combine with oxygen at an increasing rate, temperatures rise and visible heat (flames) are produced.

CLASSES OF FIRES:

- **Class A** extinguishers are for ordinary combustible materials such as paper, wood, cardboard, and most plastics. The numerical rating on these types of extinguishers indicates the amount of water it holds and the amount of fire it can extinguish. Geometric symbol (green triangle)
- **Class B** fires involve flammable or combustible liquids such as gasoline, kerosene, grease and oil. The numerical rating for class B extinguishers indicates the approximate number of square feet of fire it can extinguish. Geometric symbol (red square)
- **Class C** fires involve electrical equipment, such as appliances, wiring, circuit breakers and outlets. Never use water to extinguish class C fires - the risk of electrical shock is far too great! Class C extinguishers do not have a numerical rating. The C classification means the extinguishing agent is non-conductive. Geometric symbol (blue circle)
- **Class D** fire extinguishers are commonly found in a chemical laboratory. They are for fires that involve combustible metals, such as magnesium, titanium, potassium and sodium. These types of extinguishers also have no numerical rating, nor are they given a multi-purpose rating - they are designed for class D fires only. Geometric symbol (Yellow Decagon)
- **Class K** fire extinguishers are for fires that involve cooking oils, trans-fats, or fats in cooking appliances and are typically found in restaurant and cafeteria kitchens. Geometric symbol (black hexagon) – Uses Wet Chemical

Class of Fire	Type of Fire	Type of Extinguisher	Extinguisher Identification	Symbol
A	Ordinary combustibles: wood, paper, rubber, fabrics, and many plastics	Water, Dry Powder, Halon	A	
B	Flammable Liquids and Gases: gasoline, oils, paint, lacquer, and tar	Carbon Dioxide, Dry Powder Halon	B	
C	Fires involving Live Electrical Equipment	Carbon Dioxide, Dry Powder Halon	C	
D	Combustible Metals or Combustible Metal Alloys	Special Agents	D	No Picture Symbol D
K	Fires in Cooking Appliances that involve Combustible Cooking Media: Vegetable or Animal Oils and Fats		K	

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HAZARD AWARENESS ASSESSMENT

Initial Hazard Assessment

1. Initially assess each work site upon your arrival and identify existing and potential hazards before work begins. Immediately report any potential hazards prior to beginning work. All employees and/or subcontractors shall be involved in the Hazard Identification process.

   Review the specific task you are about to perform (include a review of the permit you may be under).

   Each work site must ensure that the hazard assessment is repeated:
   a. At reasonably practical intervals - to prevent the development of unsafe and unhealthy working conditions
   b. When a new work process is introduced
   c. When a work process or operation changes
   d. Before the construction of significant additions or alterations to a work site

2. All hazards and potential hazards must be documented and dated. Identify and report all potential hazards associated with any task. Complete the Hazard Awareness Checklist on page 22, fill out the Hazard Awareness Form on page 23 and report these risks.

   For each work site hazard you must prepare a report of Hazard Assessment Results and the methods used to control or eliminate the hazards identified.

   Provide solutions/specific actions that you are going to put into place to eliminate or minimize the hazard. Provide these to the HSE, Engineering and Administrative Departments for their review and input. Ask for authorization before participating in the implementation of such solutions/actions.

   - Each work site must ensure that any employer on a work site is made aware of any existing or potential work site hazards that may affect that employer's workers.
   - Each work site must involve affected workers in the hazard assessment and in the control or elimination of the hazards identified.
   - Each work site must ensure that employees and/or subcontractors affected by the hazards identified in a hazard assessment report are informed of the hazards and of the methods used to control or eliminate the hazards.

3. Follow-up with your job leader, supervisor or client representative if hazards have been addressed and if solutions have been implemented before returning to tasks. Use the Hazard Assessment Form on page 23 to record and date solutions, changes and actions taken to address the hazards. A copy must be sent to your job leader, supervisor or client representative.

Hazard Elimination and Control

1. If an existing or potential hazard to workers is identified during a hazard assessment, an employer must take measures in accordance with this section to
    a. Eliminate the hazards, or
    b. If elimination is not reasonably practical, control the hazard.

2. Controls
    a. If reasonably practical, each work site must eliminate or control a hazard through the use of engineering controls.

    b. If a hazard cannot be eliminated, each work site must use administrative controls that control the hazard to a level as low as reasonably achievable.

    c. If the hazard cannot be eliminated or controlled, the work site must ensure that the appropriate personal protective equipment (PPE) is used by workers affected by the hazard.

    d. If the hazard cannot be eliminated or controlled, the work site may use a combination of engineering controls, administrative controls or personal protective equipment (PPE) if there is a greater level of worker safety because a combination is used.

Emergency Control of a Hazard

1. If emergency action is required to control or eliminate a hazard that is dangerous to the safety or health of workers,
    a. Only those workers competent in correcting the condition, and the minimum number necessary to correct the condition, may be exposed to the hazard, and
    b. Every reasonable effort must be made to control the hazard while the condition is being corrected.

Additional Training - Emergency Response, Hazard Identification and Risk Awareness

1. Additional to orientation, training will be provided on standard safety programs or site specific safety programs such as;

    - Emergency Response
    - Hazard Identification
    - Risk Awareness

Health and Safety Plan

1. If ordered, a health and safety plan must be prepared and implement which includes policies, procedures and plans to prevent work site incidents.

In your assessment (but not limited to) use these questions to help identify any potential hazards:

- Are there any safety concerns?
- Do I have the right tool/equipment for the task?
- Do I have the appropriate personal protective equipment?
- What do I do if conditions change (weather emergency)?
- What else can affect others or me in the area?
- Environmental considerations?
- Include Hazard awareness check or task analysis for each task you perform throughout the day. Hazard Awareness Checklists are available for your use. Repeat these checks for each task.

NOTE: All Client and Work Site Safety Programs will take precedence and shall be followed as per the client or work site specifications.
For more details refer to the Alberta Occupation Health and Safety Act

HEAT AND COLD STRESS

Heat Stress

Heat stress takes place when your body's cooling system is overwhelmed. It can happen when heat combines with other factors such as:

- hard physical work;
- fatigue (not enough sleep);
- dehydration (loss of fluids); and
- certain medical conditions.

Heat may come from many sources:

- In foundries, steel mills, bakeries, smelters, glass factories, and furnaces, extremely hot or molten material is the main source of heat.
- In outdoor occupations, such as construction, road repair, open-pit mining and agriculture, summer sunshine is the main source of heat.
- In laundries, restaurant kitchens, and canneries, high humidity adds to the heat burden.

In all instances, the cause of heat stress is a working environment which can potentially overwhelm the body's ability to deal with heat.

Heat stress can lead to illness or even death. The company has a duty to take every precaution reasonable in the circumstances to protect their workers.

Effects of heat on the body

When the air temperature or humidity rises above the range for comfort, problems can arise. The first effects relate to how you feel. Exposure to more heat can cause health problems and may affect performance.

As the temperature or heat burden increases, people may feel:

- Increased irritability.
- Loss of concentration and ability to do mental tasks.
- Loss of ability to do skilled tasks or heavy work.

CSA Standard Reference

- EXP1010-16 - Management of work in extreme conditions

Illnesses caused by heat exposure

Heat edema is swelling which generally occurs among people who are not acclimatized to working in hot conditions. Swelling is often most noticeable in the ankles. Recovery occurs after a day or two in a cool environment.

Heat rashes are tiny red spots on the skin which cause a prickling sensation during heat exposure. The spots are the result of inflammation caused when the ducts of sweat glands become plugged.

Heat cramps are sharp pains in the muscles that may occur alone or be combined with one of the other heat stress disorders. The cause is salt imbalance resulting from the failure to replace salt lost with sweat. Cramps most often occur when people drink large amounts of water without sufficient salt (electrolyte) replacement.

Heat exhaustion is caused by loss of body water and salt through excessive sweating. Signs and symptoms of heat exhaustion include: heavy sweating, weakness, dizziness, visual disturbances, intense thirst, nausea, headache, vomiting, diarrhea, muscle cramps, breathlessness, palpitations, tingling and numbness of the hands and feet. Recovery occurs after resting in a cool area and consuming cool drinks (e.g., water, clear juice, or a sports drink).

Heat syncope is heat-induced dizziness and fainting induced by temporarily insufficient flow of blood to the brain while a person is standing. It occurs mostly among unacclimatized people. It is caused by the loss of body fluids through sweating, and by lowered blood pressure due to pooling of blood in the legs. Recovery is rapid after rest in a cool area.

Heat stroke is the most serious type of heat illness. Signs of heat stroke include body temperature often greater than 41°C, and complete or partial loss of consciousness. Sweating is not a good sign of heat stress as there are two types of heat stroke - "classical" where there is little or no sweating (usually occurs in children, persons who are chronically ill, and the elderly), and

"exertional" where body temperature rises because of strenuous exercise or work and sweating is usually present.

Heat stroke requires immediate first aid and medical attention. Delayed treatment may result in death.

Preventing heat related illnesses

If practical, workers in hot environments should be encouraged to set their own work and rest schedules. Infrequent or irregular tasks such as emergency repairs of hot process equipment often result in heat exposure. Experienced workers can often judge heat strain and limit their exposure accordingly. Inexperienced workers may need special attention as they may continue to work beyond the point at which signs of heat strain appear.

People are generally unable to notice their own heat stress related symptoms. Their survival depends on their coworker's ability to recognize these symptoms and seek timely first aid and medical help.

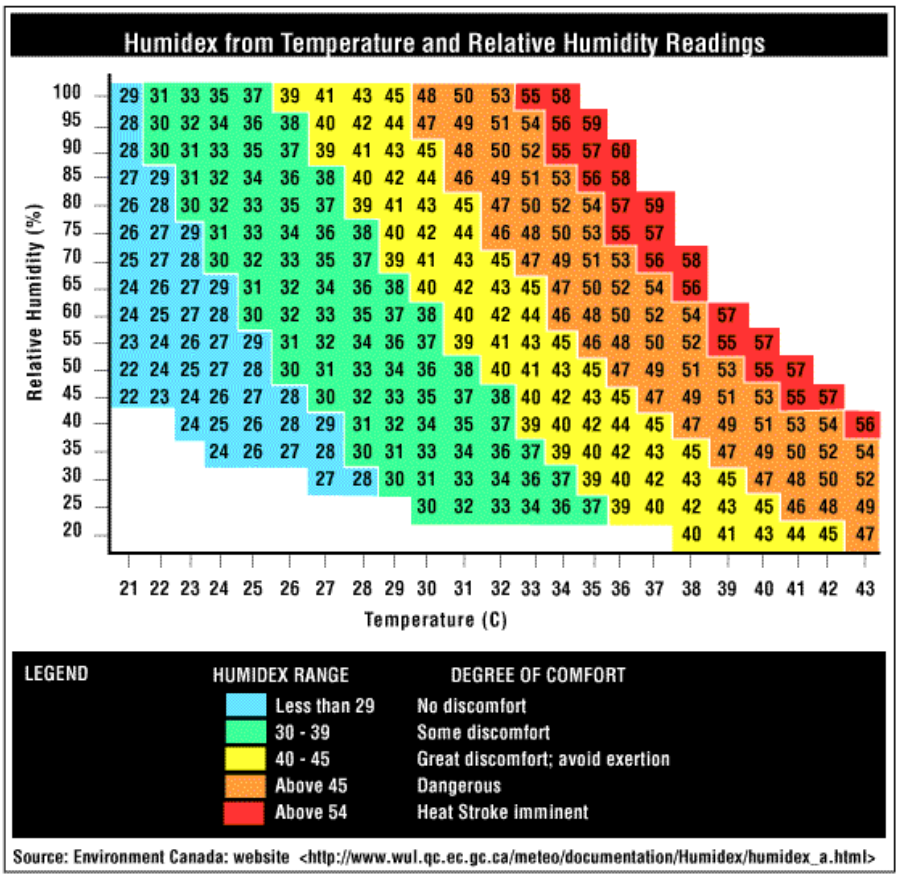
Salt and Fluid Supplements: A person working in a very hot environment loses water and salt through sweat. This loss should be compensated by water and salt intake. Fluid intake should equal fluid loss. On average, about one litre of water each hour may be required to replace the fluid loss. Plenty of cool (10-15°C) drinking water should be available on the job site and workers should be encouraged to drink water every 15 to 20 minutes even if they do not feel thirsty. Alcoholic drinks should NEVER be taken as alcohol dehydrates the body.

An acclimatized worker loses relatively little salt in their sweat and, therefore, the salt in the normal diet is usually sufficient to maintain the electrolyte balance in the body fluids. For unacclimatized workers who may sweat continuously and repeatedly, additional salt in the food may be used. Salt tablets are not recommended because the salt does not enter the body system as fast as water or other fluids. Too much salt can cause higher body temperatures, increased thirst and nausea. Workers on salt-restricted diets should discuss the need for supplementary salt with their doctor.

Sport drinks, fruit juice, etc: Drinks specially designed to replace body fluids and electrolytes may be taken but for most people, they should be used in moderation. They may be of benefit for workers who have very physically active occupations but keep in mind they may add unnecessary sugar or salt to your diet. Fruit juice or sport and electrolyte drinks, diluted to half the strength with water, is an option. Drinks with alcohol or caffeine should never be taken, as they dehydrate the body. For most people, water is the most efficient fluid for re-hydration.

Emergency Action Plan: In extreme environments, an emergency plan is needed. The plan should include procedures for providing affected workers with first aid and medical care.

If you know the temperature and relative humidity, the following chart can be used to determine the humidex rating. For example, if the temperature is 30°C and the relative humidity is 70%, the humidex rating is 41. This level is considered a level of "great discomfort" and exertion should be avoided.



Control measures can be used to reduce the effects of heat

The risk of heat-related illnesses can be reduced by:

- Engineering controls to provide a cooler workplace.
- Safe work practices to reduce worker exposure.
- Training employees to recognize and prevent heat illnesses.

Symptoms and first aid steps for heat exhaustion and heat stroke

Symptoms of heat exhaustion may start suddenly, and include:

- Nausea or irritability.
- Dizziness.
- Muscle cramps or weakness.
- Feeling faint.
- Headache.
- Fatigue.
- Thirst.
- Heavy sweating.
- High body temperature.

First aid for heat exhaustion includes:

- Get medical aid. Stay with the person until help arrives.
- Move to a cooler, shaded location.
- Remove as many clothes as possible (including socks and shoes).
- Apply cool, wet cloths or ice to head, face or neck. Spray with cool water.
- Encourage the person to drink water, clear juice, or a sports drink.

Heat exhaustion may quickly develop into heat stroke. Symptoms of heat stroke include:

- Hot, dry skin or profuse sweating.
- Confusion.
- Loss of consciousness.
- Seizures.
- Very high body temperature.

First aid for heat stroke includes:

- **Call 911 immediately. Heat stroke is a medical emergency.**
- Stay with the person until help arrives.
- Move to a cooler, shaded location.
- Remove as many clothes as possible (including socks and shoes).
- Wet the person’s skin and clothing with cool water.
- Apply cold, wet cloths or ice to head, face, neck, armpits, and groin.
- Do not try to force the person to drink liquids.

In Canada, there are no maximum exposure limits for cold working environments.

A cold environment challenges the worker in three ways: by air temperature, air movement (wind speed), and humidity (wetness). In order to work safely, these challenges have to be counterbalanced by proper insulation (layered protective clothing), by physical activity and by controlled exposure to cold (work/rest schedule).

Cold Stress

When you're cold, blood vessels in your skin, arms, and legs constrict, decreasing the blood flow to your extremities. This helps your critical organs stay warm, but your extremities are at risk for frostbite.

Wind chill is essentially the air temperature that would feel the same on exposed human flesh as the given combination of air temperature and wind speed. It can be used as a general guideline for deciding clothing requirements and the possible health effects of cold.

Wind chill accelerates heat loss—sometimes to a dramatic extent. For example, when the air temperature is –30°C,

- with no wind, there is little danger of skin freezing;
- with 16 km/h wind (a flag will be fully extended), your skin can freeze in about a minute; and
- with 32 km/h wind (capable of blowing snow), your skin can freeze in 30 seconds.

Use the chart when estimating the combined cooling effect of wind and low air temperatures on exposed skin or when determining clothing insulation requirements to maintain the deep body core temperature.

WIND CHILL CHART

		Ambient Temperature (∞C)								
		4	-1	-7	-12	-18	-23	-29	-34	-40
Wind km/h	**Velocity mph**	**Equivalent Chill Temperature (∞C)**								
Calm										
0	**0**	4	-1	-7	-12	-18	-23	-29	-34	-40
8	**5**	3	-3	-9	-14	-21	-26	-32	-38	-44
16	**10**	-2	-9	-16	-23	-30	-35	-43	-50	-57
24	**15**	-6	-13	-20	-28	-36	-43	-50	-58	-65
32	**20**	-8	-16	-23	-32	-39	-47	-55	-63	-71
40	**25**	-9	-18	-26	-34	-42	-51	-59	-67	-76
48	**30**	-16	-19	-22	-36	-44	-53	-62	-70	-78
56	**35**	-11	-20	-29	-37	-46	-55	-63	-72	-81
64	**40**	-12	-21	-29	-38	-47	-56	-65	-73	-82

Adapted from: Threshold Limit Values (TLV™) and Biological Exposure Indeces (BEI™) booklet; published by ACGIH, Cincinnati, Ohio

Little danger in less than one hour exposure of dry skin

Maximum danger of false sense of security

DANGER – Exposed flesh freezes within one minute

GREAT DANGER – Flesh may freeze within 30 seconds

Prevention - the adverse effects of cold

For continuous work in temperatures below the freezing point, heated warming shelters such as tents, cabins or rest rooms should be available. The work should be paced to avoid excessive sweating. If such work is necessary, proper rest periods in a warm area should be allowed and employees should change into dry clothes. New employees should be given enough time to get acclimatized to cold and protective clothing before assuming a full work load.

The risk of cold injury can be minimized by proper equipment design, safe work practices and appropriate clothing.

Equipment Design: For work below the freezing point, metal handles and bars should be covered by thermal insulating material. Also, machines and tools should be designed so that they can be operated without having to remove mittens or gloves.

Surveillance and Monitoring: Every workplace where the temperature may fall below 16°C should be equipped with a suitable thermometer to monitor any further temperature changes. For colder workplaces with temperatures below the freezing point, the temperature should be monitored at least every 4 hours.

Emergency Procedures: Procedures for providing first aid and obtaining medical care should be clearly outlined. For each shift, at least one trained person should be assigned the responsibility of attending to emergencies.

Education: Workers and supervisors involved with work in cold environments should be informed about symptoms of adverse effect exposure to cold, proper clothing habits, safe work practices, physical fitness requirements for work in cold, and emergency procedures in case of cold injury. While working in cold, a buddy system should be used. Look out for one another and be alert for the symptoms of hypothermia.

Precautions to prevent cold stress

- Wear several layers of clothing rather than one thick layer.
- Wear gloves if the temperature is below 16°C for sedentary work, below 4°C for light
- work, and below –7°C for moderate work.
- Take warm, high-calorie drinks and food.
- If your clothing gets wet at 2°C or less, change into dry clothes immediately to prevent hypothermia.
- If you feel hot, open your jacket but keep your hat and gloves on.
- Give workers warm-up and rest breaks in a heated shelter. Ensure work is not conducted only within allowable exposure limits, as per provincial OHS Regulations.

Health effects of exposure to cold

Cooling of body parts may result in various cold injuries - nonfreezing injuries, freezing injuries - and hypothermia which is the most serious. Nonfreezing cold injuries include chilblain, immersion foot and trenchfoot. Frostnip and frostbite are freezing injuries.

Toes, fingers, ears and nose are at greatest risk because these areas do not have major muscles to produce heat. In addition, the body will preserve heat by favoring the internal organs and thus reducing the flow of blood to the extremities under cold conditions. Hands and feet tend to get cold more quickly than the torso because:

- they lose heat more rapidly since they have a higher surface area-to-volume ratio, and
- they are more likely to be in contact with colder surfaces than other parts of the body.

If the eyes are not protected with goggles in high wind chill conditions, the corneas of the eyes may freeze.

The most severe cold injury is hypothermia which occurs from excessive loss of body heat and the consequent lowering of the inner core temperature (internal temperature of the body). Hypothermia can be fatal.

Examples of 'nonfreezing' cold injuries

Chilblains are a mild cold injury caused by prolonged and repeated exposure for several hours to air temperatures from above freezing (0°C or 32°F) to as high as 16°C (or about 60°F). In the affected skin area there will be redness, swelling, tingling, and pain.

Immersion foot occurs in individuals whose feet have been wet, but not freezing cold, for days or weeks. It can occur at temperatures up to 10°C (50°F). The primary injury is to nerve and muscle tissue. Symptoms include tingling and numbness; itching, pain, swelling of the legs, feet, or hands; or blisters may develop. The skin may be red initially and turn to blue or purple as the injury progresses. In severe cases, gangrene may develop.

Trenchfoot is "wet cold disease" resulting from prolonged exposure in a damp or wet environment from above the freezing point to about 10°C (50°F). Depending on the temperature, an onset of symptoms may range from several hours to many days but the average is three days. Trenchfoot is more likely to occur at lower temperatures whereas an immersion foot is more likely to occur at higher temperatures and longer exposure times. A similar condition of the hands can occur if a person wears wet gloves for a prolonged period under cold conditions described above. Symptoms are similar to an immersion foot.

Examples of 'freezing' injuries

Frostnip is the mildest form of a freezing cold injury. It occurs when ear lobes, noses, cheeks, fingers, or toes are exposed to the cold and the top layers of a skin freeze. The skin of the affected area turns white and it may feel numb. The top layer of skin feels hard but the deeper tissue still feels normal (soft).

Frostnip can be prevented by wearing warm clothing and foot wear. It is treated by gentle rewarming (e.g., holding the affected tissue next to unaffected skin of the victim or of another person). As for all cold-induced injuries, never rub the affected parts - ice crystals in the tissue could cause damage if the skin is rubbed. Do not use very hot objects such as hot water bottles to rewarm the area or person.

Frostbite is a common injury caused by exposure to extreme cold or by contact with extremely cold objects (especially those made of metal). It may also occur in normal temperatures from contact with cooled or compressed gases. Frostbite occurs when tissue temperature falls below the freezing point (0°C/32°F), or when blood flow is obstructed. Blood vessels may be severely and permanently damaged, and blood circulation may stop in the affected tissue. In mild cases, the symptoms include inflammation of the skin in patches accompanied by slight pain. In severe cases, there could be tissue damage without pain, or there could be burning or prickling sensations resulting in blisters. Frostbitten skin is highly susceptible to infection, and gangrene (local death of soft tissues due to loss of blood supply) may develop.

First aid if someone has frostbite

First aid for frostbite, as well as immersion or trench foot, includes:

- Seek medical attention.
- If possible, move the victim to a warm area.
- Gently loosen or remove constricting clothing or jewellery that may restrict circulation.
- Loosely cover the affected area with a sterile dressing. Place some gauze between fingers and toes to absorb moisture and prevent them from sticking together.
- Quickly transport the victim to an emergency care facility.
- DO NOT attempt to rewarm the affected area on site (but do try to stop the area from becoming any colder) - without the proper facilities tissue that has been warmed may refreeze and cause more damage.
- DO NOT rub area or apply dry heat.
- DO NOT allow the victim to drink alcohol or smoke.

The signs of hypothermia

Mild Hypothermia	37.2-36.1ºC (99 - 97ºF)	Normal, shivering may begin.
	36.1-35ºC (97 - 95ºF)	Cold sensation, goose bumps, unable to perform complex tasks with hands, shivering can be mild to severe, hands numb.
Moderate Hypothermia	35-33.9ºC (95 - 93ºF)	Shivering, intense, muscles incoordination becomes apparent, movements slow and labored, stumbling pace, mild confusion, may appear alert. Use sobriety test, if unable to walk a 9 meter (30 foot) straight line, the person is hypothermic.
	33.9-32.2ºC (93 - 90ºF)	Violent shivering persists, difficulty speaking, sluggish thinking, amnesia starts to appear, gross muscle movements sluggish, unable to use hands, stumbles frequently, difficulty speaking, signs of depression, withdrawn.
Severe Hypothermia	32.2-30ºC (90 - 86ºF)	Shivering stops, exposed skin blue of puffy, muscle coordination very poor, inability to walk, confusion, incoherent/irrational behaviour, but may be able to maintain posture and appearance of awareness
	30-27.8ºC (86 - 82ºF)	Muscle rigidity, semiconscious, stupor, loss of awareness of others, pulse and respiration rate decrease, possible heart fibrillation.
	27.8-25.6ºC (82 - 78ºF)	Unconscious, a heart beat and respiration erratic, a pulse may not be obvious.
	25.6-23.9ºC (78 - 75ºF)	Pulmonary edema, cardiac and respiratory failure, death. Death may occur before this temperature is reached.

When your core temperature drops, you're at risk for hypothermia. Early signs of hypothermia are shivering, blue lips and fingers, and poor coordination. Soon your breathing and heart rate slow down, and you become disoriented and confused. Hypothermia requires medical help.

First aid for hypothermia

Hypothermia is a medical emergency. At the first sign, find medical help immediately. The survival of the victim depends on their co-workers ability to recognize the symptoms of hypothermia. The victim is generally not able to notice his or her own condition.

First aid for hypothermia includes the following steps:

- Seek medical help immediately. Hypothermia is a medical emergency.
- Ensure that wet clothing is removed.

- Place the victim between blankets (or towels, newspaper, etc.) so the body temperature can rise gradually. Body-to-body contact can help warm the victim's temperature slowly. Be sure to cover the person's head.
- Give warm, sweet (caffeine-free, nonalcoholic) drinks unless the victim is rapidly losing consciousness, unconscious, or convulsing.
- Quickly transport the victim to an emergency medical facility.
- Do not attempt to rewarm the victim on a site (e.g., do not use hot water bottles or electric blankets).
- Perform CPR (cardiopulmonary resuscitation) if the victim stops breathing. Continue to provide CPR until medical aid is available. The body slows when it is very cold and in some cases, hypothermia victims that have appeared "dead" have been successfully resuscitated.

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HAZARD AWARENESS CHECKLIST

☐ Self Check ☐ Observation of others

ERGONOMIC CONSIDERATION

☐ Is repetitive motion present?
☐ Are awkward positions required?
☐ Is excessive force involved?
☐ Is job rotation required?

PERSONAL PROTECTIVE EQUIPMENT

☐ Eyes and Face
☐ Head and Ears
☐ Respiratory System
☐ Hands and Arms
☐ Trunk
☐ Legs

PROCEDURES/GUIDELINES AND PERMITS

☐ Have they been received?
☐ Are they adequate?
☐ Have appropriate permits been obtained?
☐ Have SDS's been reviewed?

POSITION OF PEOPLE (Injury Causes)

☐ Struck by or against
☐ Caught in, on or between objects
☐ Falling
☐ Contacting temperature extremes
☐ Contacting electrical current

TOOLS AND EQUIPMENT

☐ Appropriate tools available
☐ Tools in good condition

This Check List should be utilized when any new task has to be performed, new work area is involved, a new process is implemented or alterations are made. Please report any cause of concern immediately through the appropriate Safety Programs.

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HAZARD ASSESSMENT FORM

HAVE ALL OF THE HAZARDS BEEN ADDRESSED?
HAVE YOU RE-ASSESSED WHEN A CHANGE HAS OCCURRED**?**

TASK:	
PEOPLE AFFECTED:	
HAZARDS IDENTIFIED AND RANK ACCORDING TO RISK:	
ACTIONS TO ADDRESS HAZARDS:	
ACTIONS TAKEN:	**Date:**
NAME:	**DATE:**

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HEALTH, SAFETY AND ENVIRONMENTAL CHECKLIST

- ☐ I have reviewed the work area for risk and potential hazards.
- ☐ I have attended toolbox meetings.
- ☐ I have discussed the impacts of this work with others.
- ☐ I have inspected and have the correct PPE and equipment to do the task.
- ☐ I have reviewed the task for ERGONOMIC impacts.
- ☐ I have identified the risks with the tools I will use (on and off the job).
- ☐ I have checked the work area for unsafe conditions.
- ☐ I know that I am not allowed to perform any maintenance or repair work on vehicles including tire and tire & wheel assemblies
- ☐ I know what is expected of me in case of an EMERGENCY.
- ☐ I know to whom I am to report and when.
- ☐ I have reviewed the SDS for the chemical that I will use.
- ☐ I know my responsibilities under the applicable regulations.
- ☐ I know to keep my work area clean.
- ☐ I know how to treat waste material and what to do to recycle.
- ☐ I have checked my extension cords, hoses, and ladders in my work area.
- ☐ I have ensured that my work/play area is free from hazards (tripping, chemicals).
- ☐ I have done my equipment checks for my tools and transportation.
- ☐ I have confirmed what is required of me should I be traveling.
- ☐ I have stretched or limbered up prior to tasks that may pull muscles.
- ☐ I have the right tool for the right job.
- ☐ I have access to the resources I need for the task.
- ☐ I have checked for access and marked locations of first aid kits, updated the contents and made sure that they are secured in a properly protected area.
- ☐ I have communicated expectations to those with whom I work.

EQUIPMENT MAINTENANCE

Preventive maintenance of equipment is required in order to ensure the safe use and functioning of equipment. All equipment, tools, and machinery is to be maintained in a condition that will ensure the health and safety of workers.

A preventive maintenance program is established and implemented at the work site that includes but is not limited to the following components:

- An equipment inventory.
- A preventive maintenance schedule that meets manufacturer and legislated requirements.
- Records of all maintenance work performed.

Please report to your site supervisor any tool, equipment, or machinery that is not in good working order, not functioning properly, or poses a hazard to health or safety. In addition, remove from service tools or equipment that are worn, malfunction, or require replacement or repair, until such time as they are repaired.

FIRST AID

When First Aid is required or mandatory, training will be facilitated for site specific First Aid or First Aid training as per the client's requirements.

1. Once an employee or contractor is on site, identify First Aid signage and locations of:
    a. First Aid Services
    b. First Aid Supplies and Equipment
    c. First Aid/Medical Room (if available)
    d. Certified First Aid Personnel
    e. Emergency Communication Equipment

*Ensure that all First Aid services and supplies are available and accessible during all working hours.

Locate and ensure First Aid signs are posted in visible locations at site and indicate the location of the First Aid services, equipment and supplies. If posting the signs is not practical, every worker will be told and know the location of First Aid services, equipment and supplies. Report immediately any issues with the First Aid services and supplies to a manager or supervisor.

2. First Aid equipment and supplies should be:
    a. Maintained in a clean, dry and serviceable condition
    b. Contained in a material that protects the contents from the environment
    c. Clearly identified as First Aid equipment and supplies

*Make certain emergency communication equipment is in place for workers to summon First Aid services at every site.

Certified First Aid Personnel

Each work site must ensure that there are enough First Aiders at a work site to comply with work site First Aid regulations and their qualifications and training are current, up-to-date and hold a valid First Aid certificate. Refer to the Schedule A, tables 1, 2 and 3.

If a nurse, advanced First Aider or EMT-P is required at a work site, that person must:

a. Be based at or near the First Aid room
b. When not in the First Aid room, be easy to contact or notify if First Aid services are required

* Each work site must keep a record of workers at a work site who are First Aiders.
** All injuries and illnesses must be reported to your client site supervisor and your TSG representative and documented immediately after they occur.

Transportation

At each work site, there are arrangements in place to transport injured or ill workers from the work site to the nearest health care facility.

Each work site ensures that an ambulance service licensed in accordance with the *Ambulance Services Act* is readily available to the work site when travel conditions are normal.

Each work site ensures that if an ambulance service is not readily available to the work site, or if travel conditions are not normal, an alternate means of transportation is available that

a. Is suitable, considering the distance to be travelled and the types of acute illnesses or injuries that may occur at the work site
b. Protects occupants from the weather
c. Has systems that allow the occupants to communicate with the health care facility to which the injured or ill worker is being taken
d. Can accommodate a stretcher and an accompanying person if required

*Each work site ensures that there is a means of communication in place to summon an ambulance service.

If a worker is acutely ill or injured or needs to be accompanied during transport to a health care facility, an employee/client representative must ensure that the worker is accompanied by at least one First Aider, in addition to the operator of the transportation.

NOTE: All Client and Work Site Safety Programs will take precedence and shall be followed as per the client or work site specifications.
For more details refer to the Alberta Occupation Health and Safety Act

SELF JOB TASK ANALYSIS

Self Job Task Analysis Check List

OUR PRIORITIES

- Safety and Health of ourselves and those around us
- Protection of the environment
- Quality of life
- Quality of the work
- Cost control
- Respect for target dates
- Respect for our stakeholders

PLANNING FOR SAFETY

- Get the big picture
- Prepare for the unexpected
- Let others that may be impacted know what you are doing
- Follow safety rules, regulations, and standards. Include these in the plan.
- Get ready for the task. Plan the task and work the plan.
- Be alert for changing and unusual conditions (people, equipment, and environment).
- Maintain your work environment in a safe condition (on and off the job).

KEY SAFETY PRINCIPLES

- All injuries can be prevented at work and at home.
- Each employer has a responsibility to allow and ensure worker safety.
- Each employee or contractor has a responsibility to work safely
- What can I do to prevent injury to others or myself?

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INJURY/NEAR MISS/INCIDENT REPORTING

Reporting

- ALL injuries, near misses and incidents MUST be reported IMMEDIATELY to your client site supervisor and to your TSG representative.

- The report must document and include:
    - Time/Date and place of incident
    - Name(s) of worker(s) involved and person(s) administrating first aid (if needed)
    - Type of incident/injury, cause and treatment (if treatment was needed)
    - Time/Date of the incident/injury or near miss was reported
    - Your name and where you were when witnessing the incident

Investigation

- An investigation into all incidents will be completed in an attempt to determine a basic cause. This will help to prevent a re-occurrence of similar events.

- The documented written investigation report by TSG will include:
    - A description of the incident
    - Evidence collected during the investigation
    - A description of the causes and contributing factors of the incident
    - Any short & long corrective term actions to be taken

- You may be asked to participate in the investigation process. Please do not feel intimidated. We are merely trying to determine what caused the incident so that it doesn't happen again.

- Your cooperation and participation is vital to the process.

- Once the cause has been determined and a written investigation report is completed, the appropriate short & long term corrective actions will be assessed and implemented.

- If required, training on new procedures and investigation techniques will be provided to the investigation team. Once the investigation team has been trained they will be responsible to apply any long & short term corrective actions identified in the written investigation report.

- All records will be kept by the employer for a minimum of 3 years.

My emergency contact number is: _____

FOR EMERGENCY ASSISTANCE CALL 911 or a fellow employee.

COMMUNICATION OF SHARED SAFETY LEARNING

This is to ensure that if a safety incident occurs involving a TSG employee or contractor, the experience will be communicated to other TSG employees and contractors with lessons learned in order to avoid similar incidences from occurring.

1. TSG is notified of a safety incident that involves a TSG employee or contractor either at TSG or at a client site.

2. TSG will conduct an investigation.

3. Upon determining the conditions and causes of the incident, TSG will communicate by email to TSG employees and contractors. This communication will include a summary of safety rules and/or guidelines that address preventive measures relevant to the incident, with the expressed intent of avoiding a re-occurrence.

OFF THE JOB SAFETY (OTJ)

- TSG is concerned with your safety and health both on and off the job.

- We encourage you to report injuries and incidents that happen at home or while doing sports activities so that together we can determine what may have been the cause and assist you in preventing a re-occurrence and assist others by sharing the learning.

- If an OTJ injury or illness has the potential to affect your ability to perform your job or the potential exists for your injury or illness to be aggravated by your job, you are required to report the injury to your TSG representative and your client site supervisor.

- Share/discuss off-the-job injuries/incidents at Safety Meetings.

PERSONAL PROTECTIVE EQUIPMENT STANDARDS

Eye Protection
- CSA approval frames and lenses
- Standard is CSA Z94.3-07 “Industrial Eye and Face protectors”
- Permanently affixed side shields
- No contact lenses in process area
- Other: face shields, mono-goggles
- Standard safety glasses must be worn over glass-lens safety eyewear when there is danger of impact

Hard Hats
- Hard Hats must be worn with brim to front as designed that are appropriate to the hazards
- They must meet the CSA Standard Z94.1-05, “Industrial Protective Headwear”
- Check conditions of hardhats suspension and shell frequently.

Footwear
- Footwear to be worn according to the job hazard assessment with the work being performed and the work site requirements.
- If the hazard assessment identifies that protective footwear needs toe protection, puncture resistant sole, electrical protection, chainsaw protection or a combination of these you will be required to wear approved CSA standard Z195-02 or ASTM Standard Protective Footwear in accordance with OH&S regulations.
- If the hazard is different than above, footwear appropriate to the hazard must be worn.

Hearing Protection
- To comply with ANSI S3.19-1974 “Method for Measurement of Real Ear Protection of Hearing Protectors and Physical Attenuation of Ear Muff”
- Standard is CSA standard A94.2-M1984 and is of CSA class “A” rating.
- Earplugs, earmuffs or combination of both may be required.

Respiratory Protection
- Required where health hazards exist due to dust, fumes, mist, vapours.
- The Material Safety Data Sheet (SDS), OH&S or the supplier for the exact specifications for the air-purifying respirator should be consulted for appropriate respiratory equipment.
- The client will provide equipment and perform training in the use of breathing air equipment for toxic or oxygen deficient atmospheres.
- Training in use and care of equipment must be provided prior to using equipment.

Fire Retardant Clothing (FRC)
- To be worn when hydrocarbons are present in the work place.
- Full body FRC worn as outer layer. Rain gears currently an exception
- Approval for use by client
- Hardhats liners shall also be made of fire retardant materials
- Standard in NOMEX or PROOBAN or Client's Standard.

Hand Protection
- Gloves must generally be worn at all times when performing work where there is potential hazard. There may be exceptions depending on the task. A risk assessment should be performed and Safety Data Sheets (SDS) should be referenced.

Fall Protection
- Full body harness with shock absorbing lanyard that are approved under the following standards:
- CSA Standard Z259.1-1979, "Fall Arresting Safety Belts and lanyards for Construction and Mining Industries"
- CSA Standard CAN/CSA Z259.10-M90 "Full Body Harness"
- Anchor point able to support the shock loads as per OH & S regulations.
- Rescue plan in place
- Training in use and care of equipment must be provided prior to using equipment.

Alternative methods of fall protection should be explored before considering the use of Personal fall protection equipment (e.g. scaffolding, guardrails, serial platforms, etc). A risk assessment/task analysis should be performed prior to working at high elevation.

Other PPE
- Aprons/Pants (chainsaws, welding, cutting)
- Knee Pads (kneeling)
- Vibration Gloves (jackhammers, impact wrenches)
- Cleats (icy conditions)
- Skin protection to be worn where handling of hazardous materials is present

When equipment of any kind is required, (clients, contractors or subcontractors equipment) it shall be provided in a safe maintained condition and appropriate for the work performed. Specific work sites have different specifications and all equipment shall be safely maintained.

NOTE: All Client and Work Site Safety Programs will take precedence and shall be followed as per the client or work site specifications.
For more details refer to the Alberta Occupation Health and Safety Act

WORK PERMITS

You may be assigned to work sites where the client has a work permit system.

The following is a typical work permit system.

Types of Permits

- **Safe Work** ……..…… For all work
- **Yellow Hot** …… Grinding, vehicle entry
- **Red Hot** ……. Open flame cutting, welding
- **Confined Space** …… Tanks, vessels, manholes, excavations, trailer skirts
- **Excavation** …… Any ground penetration, drilling into walls
- **Safety Systems** …….. For all work affecting fire systems, deluges

Only qualified personnel will issue or receive permits. Training will be provided in the event you are required to become a Permit Issuer or Receiver. Contact your client site supervisor for more information on this training.

NO PERMIT . . . NO WORK

HOUSEKEEPING

Everyone from Clients, Managers, Staff, Contractors and Subcontractors must take pride in maintaining a clean safe workplace by doing the following:

- Ensuring everything is in its place
- Clear walkways of debris
- Store material properly and safely
- Remove slipping and tripping hazards
- Remove cords and hoses off walkways
- Make certain tools and equipment are safely stored

Proper clean-up planning and action reduces the risk of fires, hazards, minimizes the risk for injury, and increases job efficiency!

These simple steps apply to all areas of the work site including any process areas, construction areas, warehouse/lay down areas and any general office environment.

CLEAN WORK AREA = SAFE WORK AREA

NOTE: All Client and Work Site Safety Programs will take precedence and shall be followed as per the client or work site specifications.
For more details refer to the Alberta Occupation Health and Safety Act

SAFETY/FIRE WATCHES

You may be assigned to work sites where the client has a safety/fire watch system. The following outline the typical accountabilities for that role.

The Safety Watch, in their role, has the support of all levels of Client Leadership to accomplish their job effectively.

Safety Watches provide additional support in helping the client perform tasks safely. We need to fully co-operate with their efforts.

- Is aware of the terms and conditions of the permit
- Prepared to monitor workers' compliance with the permit and advise plant operations of non-compliance
- Monitors plant conditions and advise workers of changes to ensure that work proceeds safely
- Maintains communications with plant operations with regards to emergency conditions
- Reviews and is aware of potential hazards in the work area
- Ensures all required safety equipment is utilized as specified on the permit
- Attends toolbox and safety meetings and participates in the job review
- Is aware of appropriate safety guideline requirements
- Signs work permits at the job location after reviewing conditions.

MATERIAL HANDLING

Preform a Hazard Assessment before any Manual or Mechanical Material Handling is required. Follow the Hazard Awareness Assessment section in this manual in all material handling, manual lifting and load handling situations. Use these guidelines and follow the proper Ergonomics.

- Whenever possible, use gloves
- Take care of your back – use proper lifting techniques

BACK STRAIGHT . . . KNEES BENT . . . LOAD CLOSE TO BODY

- Wherever possible, use mechanical lifting devices
- Use taglines on suspended loads where possible
- Inspect all rigging equipment prior to each use
- ASK FOR HELP!

ERGONOMICS

IT'S YOUR WORK ENVIRONMENT!

- Avoid lengthy repetitive type motions if possible
- Ask for help and take frequent breaks from the task
- Keep your work area clean and orderly
- Use the right tools for the task
- Ensure you have enough room to work and move around without difficulty
- Perform warm-up exercises prior to performing the task
- Use adequate aids and supports to move your tools or hold them in place
- If in an office environment, using a computer, perform stretching exercises of finger, wrists, elbows, shoulders, back, neck, etc.
- Adjust workbenches and tables to the appropriate height and angle
- Ensure computer keypad and screen is at appropriate levels. Ensure the chair is comfortable, adjustable, and supports your back
- Make sure your lighting is adequate
- If you require an ergonomic assessment of your workstation, contact your client site supervisor and TSG representative
- Use the Hazard Awareness checklist to perform a "self-check" on ergonomic considerations for tasks you are about to undertake
- Ergonomic training can be provided depending on the site location or situation, if not covered in your initial orientation. If addition Ergonomics training is required contact your company representative and training can be arranged.

EMERGENCIES

Always be prepared for an emergency. Make sure you are aware of who to contact at site in case of an emergency. When starting your site assignment, verify and make yourself aware of the following:

- Work site Emergency Response Plan
- Work site Evacuation & Rescue Plan
- Emergency Transportation Plan
- Access to Ambulatory Services and Health Facilities
- Access and location of Emergency Equipment such as fire extinguishers, first aid kits, eye wash & showers, etc…

MOTOR VEHICLE SAFETY

TSG does NOT own or provide motor vehicles for work operations but is committed to safe motor vehicle operation during work and regular driving hours. No driver abstracts will be reviewed because there are no company owned vehicles.

When operating a motor vehicle these standard guidelines should be followed:

- Safe vehicle operation should always be maintained and operated in a manner with traffic laws, speed limits, weather, and visibility and within federal, provincial or municipal laws.
- A valid driver's license must be carried at all times.
- Seatbelts must be worn by all vehicle occupants, at all times.
- The use of all cell phones and hands-free devices are strictly prohibited.
- A zero tolerance drug and alcohol policy will be strictly enforced.
- All cargo should be completely secured, at all times.
- Pre-use vehicle walk around and inspection should be done before the operation of the motor vehicle.
- Regular vehicle maintenance should be completed as per the manufacturer guidelines or the client's maintenance program.
- Parking should be done in the safest manner possible and in designated parking areas. If no designated parking areas are available park in an appropriate location that does not provide a safety concern and abides to all traffic laws.
- Use pull-through parking when available or when it is safe to do so back into parking spaces (allowing the vehicle to face out wards). Thus allows easier exit from parking areas and a quick exit in case of an emergency.
- All motor vehicle incidents or accidents should be reported immediately to the appropriate authorities or supervisor.

NOTE: All Client and Work Site Safety Programs will take precedence and shall be followed as per the client or work site specifications.

TSG does not own or operate any motor vehicles for work operations.

JOB COMPETENCY/ COMPANY ORIGINATION

TSG is comprised of Recruitment Staff, Accounting Staff and Administration Staff.

A company organization chart has been completed and comprises of;

- Management Staff
- Recruitment Consultants
- Accounting
- Administration

- Minimum qualifications for management staff are: recruitment or management experience, HR or a technical engineering background with a certificate or degree from a post-secondary school.

- Minimum qualifications for recruitment consultants are: recruitment experience with a technical certificate or degree from a post-secondary school.

- Minimum qualifications for accounting staff are: accounting or payroll experience with a technical certificate or degree from a post-secondary school.

- Minimum qualifications for administration staff are: administration experience with a certificate from a post-secondary school.

Hiring Process

The hiring / verification process (generally) consists of but not limited to:

- Initial screening process
- Phone interviews
- In person interviews
- Reference checks
- Verification of qualifications (proof of certificates, courses, education)
- Offer to hire
- Orientation
- Job Training

- Job training consists of learning all aspects of the job requirements through one on one training, peer support and training manuals.
- After all initial training has been complete, work is supervised and procedures modified until the employee can show competency in the tasks required.
- Once competency has been displayed to a supervisor or manager the employee is allowed to perform tasks independently.

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ADDITIONAL INFORMATION

Your TSG representative will direct you to your initial orientation training and work location. Upon arrival you will be given more information about your specific work location by a client contact.

This may include but not limited to:
It will be your responsibility to ask questions and familiarize yourself with the list below and any other item that may not be listed below.

- Unit familiarity
- Possible H2S exposure
- Specific assembly areas
- Unit and/or client work site sign-in locations
- Communications (radio/gaitronics)
- Material safety data sheet (SDS) access
- Waste disposal locations
- Chemical hazards in work site
- Emergency eye wash/shower locations
- Safety resource material locations (client guide-lines/OH&S manual)
- Safety equipment location and tool crib
- Fire extinguisher locations
- Chemical spill procedure
- Work site Emergency Response and Emergency Transportation Plan
- Work site Emergency Evacuation and Rescue Plan
- Availability of Ambulatory service and location of Health Facilities

WORKING ALONE

It is highly recommended that no one WORKS ALONE (refer to page 12: Right to Refuse)

In the event that you MUST WORK ALONE follow these guidelines:

1. Ensure someone else knows of your task and location ahead of time, document if possible
2. Ensure that communication equipment is available to you at all times including a cellular phone, radio or some form of electronic monitoring device
3. You must know and be aware of whom to contact in the case of emergency or injury

Under no circumstances will anyone be allowed to work alone if electronic communications or monitoring equipment is unavailable.

TSG and their clients pride themselves in maintaining a safe and environmentally friendly place in which to work.

ACKNOWLEDGEMENT OF REVIEW

Part of the documentation that each new employee or contractor will sign upon beginning their work will be a "Safety Program Orientation Handbook – Sign Off" document that verifies that they have read and understand the contents of the Safety Handbook.

TSG is concerned with everyone's Health & Safety and will make every effort to ensure each person is assigned to a safe work site; one that conforms to AB OHS Practices. We recommend that upon your initial arrival you verify that plans, equipment and personnel are in place for any emergency. Please report any possible safety concerns that you may have to your TSG representative immediately.

"WELCOME – AND WORK SAFE"

SCHEDULE "A"

Table 1 First Aid Requirements - Low Hazard Work

Number of workers at work site per shift	Close work site (up to 20 minutes)	Distant work site (20 – 40 minutes)	Isolated work site (more than 40 minutes)
1	Type P First Aid Kit	Type P First Aid Kit	Type P First Aid Kit
2 – 9	No. 1 First Aid Kit	1 Emergency First Aider No. 2 First Aid Kit	1 Standard First Aider No. 2 First Aid Kit
10 – 49	1 Emergency First Aider No. 1 First Aid Kit	1 Emergency First Aider No. 2 First Aid Kit	1 Standard First Aider No. 2 First Aid Kit
50 – 99	1 Emergency First Aider 1 Standard First Aider No. 2 First Aid Kit	1 Emergency First Aider 1 Standard First Aider No. 2 First Aid Kit	2 Standard First Aiders No. 2 First Aid Kit
100 – 199	1 Emergency First Aider 2 Standard First Aiders No. 3 First Aid Kit Designated area for first aid services	1 Emergency First Aider 2 Standard First Aiders No. 3 First Aid Kit 3 blankets, stretcher, splints Designated area for first aid services	3 Standard First Aider No. 3 First Aid Kit 3 blankets, stretcher, splints Designated area for first aid services
200 or more	1 Emergency First Aider 2 Standard First Aiders **Plus** 1 Standard First Aider for each additional increment of 1 to 100 workers No. 3 First Aid Kit Designated area for first aid services	1 Emergency First Aider 2 Standard First Aiders **Plus** 1 Standard First Aider for each additional increment of 1 to 100 workers No. 3 First Aid Kit 3 blankets, stretcher, splints Designated area for first aid services	3 Standard First Aiders **Plus** 1 Standard First Aider for each additional increment of 1 to 100 workers No. 3 First Aid Kit 3 blankets, stretcher, splints Designated area for first aid services

Note: Number of first aiders indicated is for a shift

Table 2 First Aid Requirements - Medium Hazard Work

Number of workers at work site per shift	Close work site (up to 20 minutes)	Distant work site (20 – 40 minutes)	Isolated work site (more than 40 minutes)
1	Type P First Aid Kit	Type P First Aid Kit	Type P First Aid Kit
2 – 9	1 Emergency First Aider No. 2 First Aid Kit	1 Standard First Aider No. 2 First Aid Kit 3 blankets	1 Standard First Aider No. 2 First Aid Kit 3 blankets
10 – 19	1 Emergency First Aider 1 Standard First Aider No. 2 First Aid Kit	1 Emergency First Aider 1 Standard First Aider No. 2 First Aid Kit 3 blankets	2 Standard First Aider s No. 2 First Aid Kit 3 blankets
20 – 49	1 Emergency First Aider 1 Standard First Aider No. 2 First Aid Kit	1 Emergency First Aider 1 Standard First Aider No. 2 First Aid Kit 3 blankets	2 Standard First Aiders No. 2 First Aid Kit 3 blankets
50 – 99	2 Emergency First Aiders 1 Standard First Aider No. 3 First Aid Kit	2 Emergency First Aiders 1 Standard First Aider No. 3 First Aid Kit 3 blankets	3 Standard First Aiders No. 3 First Aid Kit 3 blankets
100 – 199	2 Emergency First Aiders 2 Standard First Aiders No. 3 First Aid Kit Designated area for first aid services	2 Emergency First Aiders 2 Standard First Aiders No. 3 First Aid Kit 3 blankets, stretcher, splints Designated area for first aid services	3 Standard First Aiders 1 Advanced First Aider No. 3 First Aid Kit 3 blankets, stretcher, splints Designated area for first aid services
200 or more	2 Emergency First Aiders 2 Standard First Aiders 1 Nurse or 1 EMT-P **Plus** 1 Standard First Aider for each additional increment of 1 to 100 workers First Aid Room	2 Emergency First Aiders 2 Standard First Aiders 1 Nurse or 1 EMT-P **Plus** 1 Standard First Aider for each additional increment of 1 to 100 workers First Aid Room	4 Standard First Aiders 1 Nurse or 1 EMT-P **Plus** 1 Standard First Aider for each additional increment of 1 to 100 workers First Aid Room

Note: Number of first aiders indicated is for a shift at all times.

Table 3 First Aid Requirements - High Hazard Work

Number of workers at work site per shift	Close work site (up to 20 minutes)	Distant work site (20 – 40 minutes)	Isolated work site (more than 40 minutes)
1	Type P First Aid Kit	Type P First Aid Kit	Type P First Aid Kit
2 – 4	1 Emergency First Aider No. 2 First Aid Kit	1 Standard First Aider No. 2 First Aid Kit 3 blankets	1 Standard First Aider No. 2 First Aid Kit 3 blankets
5 – 9	1 Emergency First Aider 1 Standard First Aider No. 2 First Aid Kit	2 Standard First Aiders No. 2 First Aid Kit 3 blankets	2 Standard First Aiders No. 2 First Aid Kit 3 blankets
10 – 19	1 Emergency First Aider 1 Standard First Aider No. 2 First Aid Kit 3 blankets	2 Standard First Aiders No. 3 First Aid Kit 3 blankets, stretcher, splints	2 Standard First Aider No. 3 First Aid Kit 3 blankets, stretcher, splints
20 – 49	2 Emergency First Aiders 1 Standard First Aider No. 2 First Aid Kit 3 blankets	3 Standard First Aiders No. 3 First Aid Kit 3 blankets, stretcher, splints	3 Standard First Aiders No. 3 First Aid Kit 3 blankets, stretcher, splints
50 – 99	2 Emergency First Aiders 2 Standard First Aiders No. 3 First Aid Kit 3 blankets	2 Emergency First Aiders 2 Standard First Aiders No. 3 First Aid Kit 3 blankets, stretcher, splints	4 Standard First Aiders 1 Advanced First Aider No. 3 First Aid Kit 3 blankets, stretcher, splints
100 – 199	2 Emergency First Aiders 2 Standard First Aiders 1 Advanced First Aider First Aid Room	4 Standard First Aiders 1 Advanced First Aider First Aid Room	4 Standard First Aiders 1 Advanced First Aider First Aid Room
200 or more	2 Emergency First Aiders 2 Standard First Aiders 1 Nurse or 1 EMT-P **Plus** 1 Standard First Aider for each additional increment of 1 to 100 workers First Aid Room	4 Standard First Aiders 1 Nurse or 1 EMT-P **Plus** 1 Standard First Aider for each additional increment of 1 to 100 workers First Aid Room	4 Standard First Aiders 1 Advanced First Aider 1 Nurse or 1 EMT-P **Plus** 1 Standard First Aider for each additional increment of 1 to 100 workers First Aid Room

Note: Number of first aiders indicated is for a shift at all times.