



**R4 Occupational Health and
Safety Manual 2013**

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Policy Statement

OCCUPATIONAL HEALTH AND SAFETY PHILOSOPHY POLICY STATEMENT

In compliance with the R4 Management and WorkSafeBC (WSBCC) Regulations, it is required that programs be introduced to promote a safe and healthy working environment for all employees in all areas of our operations all workers in Canada have the three basic rights; the right to know, the right to participate, and the right to refuse unsafe work.

Management responsibility and accountability shall be to establish and maintain adequate standards of maintenance of worksite, vehicles and equipment to ensure that physical and health hazards are identified and eliminated, and to develop work procedures to safeguard employees from accident and injury.

Supervisory and Foreman responsibility and accountability shall be to ensure that all employees under his direct supervision **know the hazards**, are trained and implement safe work practices to ensure the protection of employees from accident and injury on the job site and the protection of the public in the immediate area surrounding the job site.

Employee responsibility and accountability shall be to follow proper work procedures, to observe all regulations pertaining to his work, and to cooperate fully in achieving the objective of an accident, injury and industrial disease-free work environment.

Signed _____

Dated _____



Health & Safety Responsibilities Policy

R4 strives to conduct its business and work in a manner that meets or exceeds legislative health and safety requirements; we therefore have an expectation that our sub-contractors and business partners would make every reasonable effort to do the same.

R4 holds the subcontractor and all subcontractor employees responsible and accountable for conducting work in accordance with the Act and Regulations as well as the standards set out in our policies and procedures.



General Safety Rules

1. Any unsafe conditions or equipment must be reported to the foreman immediately and any employees who may become involved must be warned.
2. The attention of fellow worker must never be distracted while he is working.
3. Rings, wrist watches, bracelets or dangling neckwear must not be worn in any work situation where there is a hazard of them becoming caught in machinery or other objects.
4. Safety harness and lifelines must be worn when working at elevations greater than 10 feet grade or floor level.
5. Protruding nails are to be removed or clinched over.
6. Equipment or machinery must be not be cleaned or adjusted while it is running or in motion when there is a danger of contact with moving parts.
7. A machine must never be left running while it is unattended except for stationary equipment. (Welders, compressors), or where special conditions prevail and precautions are taken.
8. Only authorized personnel may do electrical work of any kind.
9. Only authorized personnel may operate cranes, other lifting equipment and specialized equipment.
10. It is strictly forbidden to ride a load, crane hook or material hoist.
11. No one must ever stand or walk under a suspended load.
12. Gasoline-powered motors must be stopped before refueling and the NO-SMOKING rule must be observed.
13. Gasoline, oil, grease and other flammable liquids must be stored clear of the work area and NO SMOKING signs are to be prominently displayed in the storage area.



14. All scaffolding material must be examined before using.
15. No one must ever jump from, or onto, staging or scaffolding.
16. No one must ever lean against guardrails or handrails.
17. Loose materials or tools must never be left where there is a danger of them falling.
18. Openings must never be left uncovered or unguarded.
19. Workers are to know and comply with the General Safety Rules. Failure to do so will result in disciplinary action up to and including termination.
20. All cranes and boom trucks will have a valid certificate of inspection before coming on the worksite and be regularly inspected while on the Worksite.
21. All devices used to suspend workers must be similarly certified.
22. All scaffolding must comply with WCB Regulations.
23. All controlled products must have Material Safety Data Sheets (MSDS) before the products is allowed on Worksite.
24. Any worker who is uncertain about a safe work procedure should contact the Supervisor for direction.
25. Employees must not engage in horseplay.
26. Failure to wear Personal Protective Equipment in designated areas, making safety devices ineffective with proper authorization or disregard of others safety precautions or rules.

A copy of the General Safety Rules will be provided to, and reviewed with, each worker who has not previously worked for the company. This will be done prior to the commencement of work.



Safety And Conduct Rules Policy

R4 is committed to providing a safe working environment for its employees. In that endeavour, it may mean disciplinary action must be taken. That action may be due to either a major infraction or a minor infraction. Major infractions consist of any act that is a violation of any government or company rule or safe work producers that have a serious threat to life or damage to property. Minor infractions consist of any act that is a violation of any government or company rule or safe work procedure that has the potential to cause minor injury or damage to property.

Disciplinary Procedures

Major infractions have a two-strike policy:

First offense results in a verbal and written disciplinary warning and suspension without pay. Second offense results in termination.

Minor infractions have a three-strike policy:

First offence results in a verbal and written disciplinary warning;

Second offence is a verbal and written disciplinary warning and suspension without pay. Third offence results in termination.

A terminated employee on special occasion may be re-instated with the general okay with all involved. But then there will be a written assurance that the infraction shall never happen again. Parties to be involved in the process may include Construction Manager, Safety Coordinator; site CSO's, Superintendents and Supervisors. The Joint health and safety committee shall review safety and conduct rules monthly and annually.



Disciplinary Policies

To ensure that all employees of R4 are held accountable for their own actions in relation to safety and company rules, the following disciplinary action steps will be taken, if required.

Offences are categorized as minor or major infractions. Infractions include actions that impede production, employees who flagrantly disregard rules and regulations and are a hazard to themselves, their work associates, company property and equipment.

Minor infractions could include:

- Absenteeism, and failure to call in
- Not attending safety meetings
- Failure to call in when working alone resulting in a search to begin unnecessarily.

Major infractions could include:

- Careless or abusive use of company equipment
- Failure to carry out specific orders of a supervisor
- Violation of safety rules
- Failure to wear safety equipment in defined work sites
- Tampering with safety equipment or fire extinguishers
- Removing or immobilizing safety guards or devices
- Short cutting job procedures

Verbal Warning – First Infraction

A verbal warning is the first step in R4 disciplinary action and should be utilized when supervisors or fellow workers notice that Safe Work Procedures or company policies are not being followed.



The verbal warning should be documented and discussed with upper management. The Verbal warning will be noted in the employee's personnel file.

Written Warning – Second Infraction

After issuing a verbal warning (or if an initial, serious infraction occurs), supervisors should issue a written warning indicating whether or not the employee should participate in formal or informal training.

To ensure that all employees of R4 are held accountable for their own actions in relation to safety and company rules, the following disciplinary action steps will be taken, if required.

Offences are categorized as minor or major infractions. Infractions include actions that impede production, employees who flagrantly disregard rules and regulations and are a hazard to themselves, their work associates, company property and serious infractions and (continued) lack of personal accountability will result in a suspension from work. These offences pertain to an outright breach of company rules and regulations. If an individual has totally disregarded all rules and regulations without regard for R4 or fellow employees, the individual will be immediately suspended (without pay) pending an investigation of the offence. Discharge will be upon proof of the offence.

Management will determine whether or not:

1. The employee will undergo a suspension.
2. The suspension will be extended for a longer period of time.



3. The employee will be demoted or terminated from their current position.

Dismissal infractions include:

- Reporting for work under the influence of alcohol or unauthorized drugs
- Willful damage to company property or equipment, or that of another employee's
- Theft from the company or fellow employees
- Committing an act of violence, harassment, or extreme prejudice against fellow employees, supervisors, or customers
- Falsifying records including accident/incident records, timesheets, etc.
- Refusal to wear or use safety equipment when ordered to do so by a supervisor
 - Breach of confidentiality about clients, fellow employees or company business

All warnings and records will be kept on the R4 employee file in order to monitor the safety longevity of the employee.



Loss Control Policy

Health and Safety

R4 believes that a safe and healthy workplace and a clean environment are of vital importance to meeting the needs of employees and of a successful operation.

We believe that:

- Risks inherent in our operations must be identified and controlled.
- The health and safety of each employee is important to the successful completion of projects.
- Management is responsible and accountable for providing a safe, healthy work environment.
- Each employee is responsible to take an active role in the development and implementation of our health and safety culture.

Safety is an Attitude

Safety is not something you can take or leave alone. It is not an activity in which one participates only when one is being watched or supervised. Safety is not posters, slogans or rules nor is it movies, meetings, investigations or inspections.

Safety is an attitude, a frame of mind. It is the awareness of one's environment and actions all day, every day. Safety is knowing what is going on, knowing what can injure anyone or anything; knowing how to prevent that injury and then acting to prevent it. To do this does not require genius, a Ph.D. or even a title or rank. All it requires is intelligence and reasonable amount of native ability to see, to hear, to smell and to think.



Responsibilities

Employers Responsibility

Employers have ultimate responsibility. As with all other aspects of the workplace (e.g., productivity or quality), employers have the final say in what should or should not happen. They are responsible for planning, organizing, leading, and controlling results. This includes:

- Providing a safe and healthful workplace
- Establishing health and safety requirements specific to the workplace
- Providing training for supervisors
- Ensuring employees are trained
- Providing first aid facilities
- Ensuring personal protective equipment is available.
- Reporting accidents, injuries, and cases of occupational disease to the appropriate authorities
- Supporting supervisors in their health and safety activities
- Evaluating the health and safety performance of supervisors
- Supporting all worthy health and safety initiatives
- Enforcing all aspects of workplace health and safety
- Setting a good example



Supervisor Responsibility

Supervisors have administrative responsibility. Supervisors must act on the directions and guidance given by management and ensure that the desired results are achieved. These responsibilities apply to safety, as well as other operational requirements that include:

- Training and instructing new employees in safe work procedures
- Ensuring all employees are adequately trained in the safe performance of their job, and checking their progress
- Ensuring only authorized, properly trained employees operate equipment or use hazardous chemicals
- Enforcing all aspects of the organization's health and safety requirements
- Enforcing legal requirements for health and safety
- Ensuring legal requirements for health and safety
- Ensuring personal protective equipment is used correctly and kept in good order
- Ensuring that equipment and materials are properly handled, stored, and maintained
- Inspecting for and correcting unsafe acts and conditions
- Identifying employees with performance problems (including substance abuse) that could affect health and safety, and follow-up with interviews and referrals where necessary
- Reporting and investigating all accidents and incidents
- Promoting safety awareness in employees
- Formulating safety rules and coordinating safety with contractors working onsite
- Setting a good example



Contractors Responsibility

Contractors are largely responsible for their own health and safety, and are encouraged to develop a written health and safety program. They shall provide their own appropriate safety equipment when required and their own WorkSafe BC coverage.

Contractors shall ensure that:

- They can demonstrate that they are fully covered by WorkSafeBC,
- They comply with government regulations,
- They attend job orientation meetings when required,
- They report all workplace incidents to the Project Coordinator/Site Contact,
- They plan and execute all work in a manner that complies with government regulations, the R4 Health and Safety Program, and the client's safety program,
- Before commencing work, they contact the Project Coordinator/Site Contact for special instructions regarding operating hazards and applicable safe work procedures particular to the site,
- They explain R4 safety standards to their employees and obtain compliance from them,
- They provide and enforce the use of required personal protective equipment,
- They arrange first-aid treatment and emergency transportation for their employees,
- If they have any doubt regarding the meaning or interpretation of the Company safety program, they contact the Project Coordinator/Site Contact.



Management

Management's responsibilities for health, safety & the environment include, but are not limited to:

- Ensuring that the designated onsite personnel are knowledgeable in the Health, Safety & Environmental requirements.
- Ensuring subcontractor management personnel are aware of the need to comply with R4 OH&S Program and all applicable government regulations.
- Developing the Project OH&S Program
- Ensuring the initial project Hazard Assessment and Environmental Hazard Assessment is completed prior to mobilization.
- Communicating any significant OH&S issues and concerns to the Project team.
- Pre-qualifying subcontractors and approving their OH&S Program submittals.
- Providing resources to ensuring that the appropriate corrective actions are implemented in a timely and effective manner.
- Ensuring weekly project safety meetings are conducted.
- Identifying specialized safety equipment that may be required and ensuring that the required equipment is available, before mobilizing the project.
- Ensuring all equipment/material suppliers comply with all relevant government regulations, manufacturers' specifications and R4 safety requirements.
- Participating in investigations of accidents that result in serious losses.
- Assisting the Project team in the implementation of "Crisis Management."
- Ensuring R4 Project Specific Safety Program and all applicable regulations, laws and codes are enforced.



- Ensuring Weekly Safety Meetings and Daily Coordination Meetings are organized.
- Ensuring that hazards are managed at all times and when this is not possible, that work is immediately stopped until appropriate corrective measures are taken.
- Performing Project Inspections and ensuring Foremen complete Area Inspections for their specific area of responsibility.
- Accompanying Government OH&S Officers during inspections and ensuring that the corrections necessary to comply with legislation are taken.
- Ensuring an orientation program for new or transferred workers is implemented.
- Ensuring that the Emergency Response Plan and Environmental Protection Program is completed and communicated to all project personnel.
- Ensuring that supervisors implement the New Worker Program “Mentoring Program”.
- Reporting serious accidents and incidents as required by regulations.
- Ensuring that all accidents, incidents, near misses, work refusals and harassment allegations are investigated by supervisors and determine the extent of the investigation.
- Ensuring there is an effective Light Duty (Modified Work) Program.



- Reviewing project OH&S performance accident/incident trends and taking appropriate action when reports reveal that undesired trends are developing.
- Identifying and ensuring the availability of specialized safety equipment prior to project mobilization.



Project Manager and Superintendent, OH&S Responsibilities

Each Project Manager, Superintendent's, responsibilities for Health, Safety & the Environment include, but are not limited to:

- Implementing the Project Specific Safety Program and communicating it to all foremen, workers and subcontractors under their authority the applicable responsibilities and specific duties to all.
- Enforcing R4 Corporate OH&S Program and all applicable regulations, laws and codes.
- Attending Weekly Safety Meetings and Daily Coordination Meetings and ensuring that Foremen conduct daily Tailgate Meetings.
- Planning and co-operating with other project supervisory personnel regarding the safe coordination of work being performed.
- Conducting Hazard Assessments and Environmental Hazard Assessments for their area of responsibility.
- Ensuring that hazards are managed at all times and when this is not possible, that work is immediately stopped until appropriate corrective measures are taken.
- Performing Area Inspections of their specific area of responsibility.
- Developing specific Fall Protection Plans for their scope of work.
- Ensuring that all new or transferred workers attend orientation and have the appropriate qualifications, regulatory certificates and tickets prior to engaging in proficiency designated work such as gas fitting, welding and operating equipment.



- Assessing the skills of workers and provide adequate training, coaching and supervision to inexperienced workers.
- Ensuring that the Emergency Response Plan and Environmental Protection Program is communicated to all project personnel.
- Investigating all reported accidents, incidents, near misses, work refusals and harassment allegations to the degree determined by the Construction Manager.
- Implementing corrective actions and evaluating effectiveness.
- Remaining current with new safety equipment and techniques.
- Ensuring established housekeeping standards are maintained.
- Detecting troubled workers and taking steps to intervene.
- Providing a visible and professional leadership role in ongoing OH&S efforts.



Foreman, OH&S Responsibilities

Each Foreman's responsibilities for Occupational Health & Safety include, but are not limited to:

- Reporting directly to their Area Superintendent.
- Being familiar with, complying and enforcing the project and corporate OH&S programs, as well as all government regulations, laws and codes.
- Coaching workers on OH&S standards and regulatory compliance.
- Holding daily Toolbox Meetings with their crew, recording the meeting minutes in the Toolbox Meeting Records Book and ensuring their crew attend and participate during meetings.
- Monitoring and managing project hazards and to immediately stop work when any hazard threatens to compromise OH&S integrity.
- Communicating to each worker under their authority the potential hazards and the required controls associated with their work assignments.
- Inspecting work areas regularly and implementing prompt corrective action for controlling any unsafe acts, behaviors or conditions.
- Notifying the Project Manager of all reported accidents, incidents, near misses, refusals to work or harassment allegations.
- Planning and co-operating with other project supervisory personnel regarding the safe coordination of work being performed.
- Ensuring safety equipment and protective devices are provided and used for each task.
- Observing new hire work performance to ensure workers are able to perform assigned duties safely and to ensure direct supervision is provided until an acceptable level of competence is observed.



- Ensuring that ANY and ALL injured persons (regardless of how minor the injury) are escorted to the appropriate first aid or medical facilities.
- Ensuring established housekeeping standards are maintained.
- Ensure the safety orientation is given to new or transferred workers prior to work commencing.
- Detecting troubled workers and taking steps to intervene.
- Providing a visible and professional leadership role in ongoing OH&S efforts.



Worker, OH&S Responsibilities

Each worker's responsibilities for Health, Safety & the Environment include, but are not limited to:

- Reporting directly to their Foreman or immediate supervisor.
- Arriving at work free of the influence of drugs or alcohol.
- Following the Project OH&S Program and taking an active role in protecting themselves and their fellow workers at all times.
- Immediately reporting any hazardous conditions, unsafe practices, accidents or near misses to supervision.
- Taking an active role in controlling project hazards.
- Attending Tailgate Meetings and taking an active role in accident prevention.
- Providing suggestions to improve OH&S performance.
- Using all safeguards and safety equipment provided.
- Reporting all injuries, illnesses or harassment promptly to supervision.
- Submitting copies of the worker's accident report to the Workers' Compensation Board as soon as possible to ensure prompt payment of medical expenses and/or compensation.
- Reporting any anticipated lost-time to supervisor after receiving medical treatment.
- Participating as required, in accident investigations and completing Accident Report/Investigation Forms.
- Refusing any assigned work that is believed unsafe or poses a risk to health or safety.
- Ensuring co-workers are advised of unsafe conditions or acts that may cause injury or illness



Construction Safety Officer

The Construction Safety Officer's responsibilities for Health, Occupational Health & Safety include, but are not limited to:

- Reporting directly to the Project Manager with a line of communication to the Management.
- Administering, coordinating, monitoring and auditing compliance to the project OH&S Program.
- Assisting Area Superintendents and Foremen in investigations, analysis and completion of accident/incident and near miss reports and summaries.
- Accompanying Government OH&S Inspectors during inspections and to ensure that the necessary corrections to comply with legislation are taken.
- Implementing and coordinating OH&S training programs and ensuring appropriate training is made available.
- Ensuring that project specific emergency response planning is completed documented and communicated to all personnel in the area.
- Assisting project supervision in hazard assessments, analysis and the development of specific safe work procedures.
- The CSO must set a good example and abide by the Construction Safety Officers Code of Ethics
- Liaise with Occupational Health & Safety and owners/clients as needed to ensure cooperation; and the maintenance of a safe work environment
- Conduct audits and inspections: report results and implement corrective action as required.
- Review all safety reports to assess the effectiveness of the safety program and to recommend appropriated corrective action as required.
-



- Solve safety –related problems on the work site and report to Project Manager
- Address and coordinate input related to WSBC.
- Keep current on developments in industry and accident prevention
- Investigate all near misses, accidents, and incidents.
- Participates in Hazard Assessments
- Assist with training and Orientations
- Reporting any conditions that do not meet regulatory requirements to the Project Superintendent.
- Staying current with R4 OH&S program, safety equipment and regulations.
- Reviewing accident reports and maintaining monthly statistics to identify trends.



Subcontractor OH&S Responsibilities

Each subcontractor's responsibilities for OH&S include, but are not limited to:

- Complying with the Project Specific Safety Program and all applicable government regulations.
- Implementing and complying with their approved OH&S Program
- Demonstrating leadership and cooperating with all matters relating to OH&S
- Providing experienced and qualified supervision.
- Designating an OH&S representative with lien authority and the ability to initiate corrective action.
- Ensuring that all their workers have attended the Safety Orientation prior to beginning work on the project.
- Ensuring that all their workers are aware of the project OH&S standards and regulatory requirements.
- Ensuring that all personnel are qualified through appropriate competency based job training or direct supervision.
- Ensuring that all safety meetings are held with all workers and copies of these sessions are submitted for the project records.
- Ensuring that their entire crew attends the weekly Tailgate safety meetings.
- Ensuring that their supervisors attend scheduled Project Safety Meetings and Daily Coordination Meetings.
- Reporting and investigating all accidents, Refusals of Unsafe Work and near misses to the Construction Manager immediately.
- Adequately identifying and controlling all hazards that have the potential to cause losses on site or to others near the site.
- Stopping work when a hazardous condition poses a risk to any individual's health or safety or to the environment.



- Communicating any issues that do not comply with the Project HS&E Program, their approved HS&E Program or regulatory requirements to the Construction Manager.
- Participating actively in all site OH&S efforts.
- Manage their workforce and to strictly enforce an alcohol and drug policy.

Supplier OH&S Responsibilities

Supplier responsibilities for Occupational Health & Safety include but are not limited to:

- Reporting directly to the site office prior to accessing the site.
- Ensuring that the OH&S standards are followed at all times while at the site.
- Ensuring that all equipment/material supplied meets or exceeds applicable manufacturer's specifications, regulations and codes.
- Ensuring that a corresponding Material Safety Data Sheet (M.S.D.S.) accompanies all controlled products and any other documentation as required by regulations.



Visitor OH&S Responsibilities

Visitor responsibilities for Health, Safety and the Environment include but are not limited to:

- Reporting to the site office prior to accessing the site.
- Complying with the Project OH&S Program requirements and taking an active role in protecting themselves and others at all times.
- Immediately reporting any hazardous conditions, unsafe practices, accidents or near misses to project management or supervision.
- Taking an active role in controlling project hazards
- Completing orientation before accessing the site. Visitors may be exempt from attending orientation provided they are escorted at all times by an individual who has already attended orientation. The Project Manager will deal with each request for exemption on an individual basis.

Note: Management and Supervision reserve the right to deny site access to any individual that does not comply with OH&S or Security Standards.



Hazard Management

Hazard management is an essential part of a successful OH&S program. The Project OH&S Program is designed to identify, assess and control hazards to effectively reduce the risk of losses. Subcontractors are expected to comply with the hazard management procedures described herein.

Definitions

Control	Implementation of one or more methods designed to reduce losses
Hazard	A condition or behavior that creates potential for personal harm or undesired health effects, as well as loss to the environment, property or production
Hazard Identification	The process of identifying hazards that may create losses to people, equipment, materials, property or the environment
Job	An activity requiring several tasks to be completed
Job Instructions	A system for communicating hazards as work progresses
Loss	Human injury/illness, damage or theft to materials, property or environment
Project Hazard	Process of identifying hazards based on scope of work, assessment plans, as-built drawings, weather conditions, environmental considerations and actual physical site assessment
Risk	Probability that an undesired event will occur
Risk Rating	A guideline used to prioritize and identify any potential standard hazards for corrective action
Task	The steps required to completing an activity
Task Hazard	Assessing the hazards related to the work being performed

Contributing Causes of Accidents

Common Accident Causes



Accident investigations have clearly shown that accidents do not just happen; they are caused. The most common accident causes are:

- × Rules and procedures not observed
- × Use of improper tools, equipment, or procedures
- × Protective equipment not used
- × Failure to secure the right equipment
- × Failure to correct unsafe conditions
- × Inattention
- × Operating without authority
- × Poor housekeeping
- × Poor communication
- × Lack of inspection and maintenance
- × Unsafe vehicular speed
- × Unchecked, poor or incorrect work procedures and practices

Specific safety regulations and procedures have been developed to address these common issues.

Hazard Assessment

Hazard Assessments are utilized as a planning tool during each phase of the project to ensure that risk is properly identified and that the appropriate controls are developed and implemented to prevent loss. The following steps shall be taken to ensure that the hazards are identified and the associated risk is properly quantified.

1. The Foreman will conduct an initial project hazard assessment prior to mobilizing the site.



2. A Hazard Assessment Form will be completed by each Area Foreman or designate, prior to beginning work or when the scope of
3. Work or working environment changes significantly within their area of responsibility.
4. The Safety Coordinator may be utilized to provide assistance in the preparation of Hazard Assessments.
5. Each hazard identified must be prioritized on the basis of risk.
6. All hazards requiring control must be noted on the Corrective Action sheet. The Hazard Assessment process is not complete until each of the hazards noted on the Correction Action sheet have been addressed and initialed by the person who performed the Hazard Assessment and signed-off by the Superintendent.
7. All hazards noted in the Hazard Assessment and their associated controls, will be added to safety meeting agendas and discussed with workers, and added to orientation, as required.
8. Specific and formalized Job Procedures and Safe Work Practices will be developed when a Hazard Assessment identifies activities that:
 - Require steps to be performed in a specific order or sequence;
 - Have complex steps and require a high degree of skill; or
 - Have a high potential for injury or loss due to one or more critical hazards.

Analysis is completed and reviewed with the crew prior to beginning any activity that is: Hazardous with a high degree of risk and a potential for serious injury; or seldom performed and new to the crew.



Written Safe Work Practices and/or Job Procedures will be developed when the task:

Requires the steps to be performed in a specific order or sequence.

- Has complex steps and requires a high degree of skill.
- Is considered hazardous with a high degree of risk and potential for injury or loss due to one or more critical hazards

The steps required to complete a Safety Task Analysis are as follows:

1. Review the scope of work to be performed
2. Break the task or job into individual steps
3. Identify both actual and potential hazards for each step
4. Develop appropriate controls and preventative action for each hazard
5. Review the Safety Task Analysis with experienced workers

Upon completion of the Safety Task Analysis controls will be developed and discussed with the crew at a pre-job meeting prior to commencing work.

Hazard Controls

Once hazards are identified and assessed, appropriate hazard controls must be designed and implemented. Hazard controls are presented in order of preference:

1. Administrative Controls
2. Applied Controls
3. Personal Protective Equipment (last resort used to protect workers)



Applied Controls

Applied controls are the preferred method of control because they control the hazard at its source. These controls are listed in order of preference below:

- Elimination - applied at design stage; guards, scaffolds, trench boxes
- Substitution - purchase a non-flammable solvent, less toxic products
- Isolation - barriers, shields, air conditioned cabs
- Ventilation - scrubbers, area fans, local exhaust

Administrative Controls

Examples of administration controls include:

- Safe Work Permits
- Safety Meetings
- Rules and Regulations
- Job Procedures
- Work Practices
- Codes of Practice
- Inspections
- Pre-Job Meetings
- Permits



Inspections

The maintenance of a hazard free work site is a daily if not hourly task. Regular, daily site safety inspections must be conducted in addition to periodic general site safety audits, to keep safe working practices at the forefront of worker consciousness. These, in house inspections, conducted by the designated site CSO, in addition to client facilitated safety audits will ensure that the work site is kept hazard free and compliant with the provincial Occupational Health & Safety Regulation.

General (Daily) Site Safety Inspections

This daily inspection will be conducted following the morning Tailgate meeting and the resolution of any concerns arising from that meeting. The daily inspection (“General Daily Safety Check List”) will consider:

- Task specific tools, equipment and materials and their condition
- Presence and completion of required documentation and inspection forms
- Implementation of engineered requirements and presence of components required to safely and effectively implement requirements
- Ongoing compliance maintenance relating to changing working conditions as work progresses

This form is designed to successfully assess all of the potential task hazards onsite in a checklist format, bringing to the attention of the safety coordinator (CSO) to all of the potential hazard situations that may develop.



Weekly Site Safety Inspection

The weekly site inspection will be conducted once a week by the CSO, in place of that days daily site inspection form. This inspection form is of a slightly different format, allowing for issue specific categorization, hazard and priority level classification and notation of rectification, expected completion timeline and person(s) responsible. The intent of this document is to integrate these audits into the monthly managers safety meetings for review, to discuss and develop solutions to site safety behaviors and observe any trends or habits that may forming. These inspections (“Weekly Site Safety Inspection”) will consider:

- 32 individual categorical considerations
- A three tier hazard or priority scale
 - 1: **HIGH** *Requiring immediate attention*
 - 2: **MODERATE** *Requiring attention by the end of the shift*
 - 3: **LOW** *Requiring attention in a timely manner*
- Notation of the specific hazard concern
- Corrective action to rectify concern and expected completion timeline

As required by provincial legislation, these weekly inspections are mandatory and all records of said inspections will be kept no less than three years.

Mobile Equipment Inspection

It is required that all *operators* of mobile equipment perform pre-trip inspections of the machinery prior to *every shift* to ensure safe operating condition.

Any findings of these inspections must be noted on the inspection form, communicated to the supervisor and where applicable, repaired or adjusted prior to operation.



R4 inspection forms developed for all of the equipment that are anticipated being used are to be used on all work sites.



Management Meetings

The monthly meeting of Management, Safety Personnel, Supervisory staff and Worker representative(s) will be conducted on the first Monday of every month. The safety person in attendance will minute (record) these meetings and records kept for review at the following months meeting, to aid in indentifying worsening/improving trends.

It is at this point where review of any incident investigation reports accumulated over the last months period will be reviewed and discussed, site safety audits assessed and any other safety related matters brought up for discussion.

General project and progress related discussion will be held until after the safety component has been satisfied.

The overall agenda of these meetings will be:

- Review of the previous months meeting minutes
 - *WSBC Inspections*
 - *Incident/Accident Inspection Reports*
- Last Months Incident Reports
- Last Months Accident Reports
- Last Months Near Miss Reports
- Information and Handouts
 - Hazard Alerts
 - Current Issues and News (Latest WorkSafe Magazine, relatable fines and penalties, etc.)
- New Business
- Open forum (free discussion re: current state of project, safety, personnel, etc.)
- Meeting adjourned (recorded)



The result of these meetings will be a collective decision making body, that will agree on which course of action is best to handle each individual topic or issue. Ultimately the binding conclusion to any discussed topic will rest with upper management, the group will contribute to the most effective and cohesive resolution.

These recorded minutes are to be prepared and copies given to all site supervisors for inclusion into that weeks Toolbox meeting to communicate the details of the meeting to all of the working staff.

Copies will also be posted in the communal area at head office in a conspicuous place for anyone to review at their leisure.



Investigations

Accidents, Incidents and/or Near Misses

WorkSafeBC must be notified for the following types of incidents

1. Any incident that kills, cause risk of death or seriously injures a worker
2. Any blasting accident that results in injury, or an unusual event involving explosives
3. A diving incident that causes death, injury or decompression sickness requiring treatment
4. A major leak or release of a dangerous substance
5. A major structural failure or collapse of a structure, equipment, construction support system, or excavation
6. Any serious mishap

The designated Site Safety Officer/Coordinator (CSO) will be responsible for investigations. This designate will be trained, experienced and competent in the fields being overseen. Documentation or proof of education/training will be available upon request.

In order to maintain objective statistics of the on site effectiveness of the safety program, the investigation of all incidents, accidents and/or near misses (the preceding classifications will be referred to as 'incidents' herein after) are to be investigated immediately upon reporting of any of the above stated.

At the time of a new worker site orientation/indoctrination, each person is made aware of their responsibility to immediately report any and all accidents, incidents and/or near misses to the site supervisor or safety coordinator.

The following summary will clarify the policies and processes exercised by R4 when investigating incidents.



Where an incident has occurred, the designated Safety Coordinator (CSO) will report to the Supervisor of the information communicated (if not vice versa).

Where first aid is required, the facilitation of required assessment and application of treatment will precede any investigation processes although any and all personnel that had been involved or witnessed the incident will be instructed not to leave the work site pending an investigation.

The investigation process will be executed as follows:

- The CSO will inquire as to who had witnessed, been involved with or contributed to the incident in question
- These individual persons will be asked to complete a witness statement form paying, attention to:

- Witness name, position and contact information
- The current date and time
- The date and time of the incident
- An objective account of the incident as observed by the witness
- Dated and signed

These statements will be copied and attached to the completed investigation report, outlined below

These personnel will be asked to complete this statement separately from one another to avoid cross-referencing

- Once the witness statements have been compiled, the safety coordinator will review the worker accounts and complete the “Incident / Accident / Near Miss Report”. This report will summarize employee particulars as well as key contributors to the incident being investigated. Required points of consideration will be;
 - Involved employee information
 - Date and time of incident



- Date and time of reporting and to whom

 - First Aid rendered and Attendant credentials/reg#
 - Specification of the type and severity of the incident
 - Probability of reoccurrence
 - Preceding occurrences to the incident
 - Key contributing factors to the incident
 -

 - [If helpful] a sketch of the scenario to aid in clarification of the events at Managerial safety meetings
 - Decided corrective measures, onus of responsibility and expected date of completion
 - Name(s) of investigator(s)
- The completed incident investigation will be reviewed by the supervisor and submitted to head office for addition to the project file and inclusion into the next Managers Safety meeting.

All incident investigations that arise throughout the month will be reviewed in the “Monthly Corporate Safety Meeting” (MCSM). See “*Management Meetings*” and “*Records and Statistics*”

The records that result from incident investigations will be kept no less than three years as required by provincial legislation.



Records and Statistics

The documentation of all generated paperwork will be kept no less than three (3) years, at head office, as part of the project files. These will be available for review should it be necessary for investigation purposes or for any other reason.

Tracking of documented:

- × Incidents
- × Accidents
- × Near misses
- × First aid
- × Medical aid
- × Lost time accidents

Will be recorded on a spreadsheet and assessed quarterly and annually to determine when and where to afford attentions to developing trends.

This quarterly chart will be included in January, April, July and November's monthly Managers meeting as well as in the year end Meeting, effectively showing the overall annual trends relating to the corrective measures decided upon. This will aid in developing more effective controls and procedural, working behaviors in the future.

Collection and archiving of:

- × Site inspection reports
- × Equipment inspection reports
- × Tailgate meetings
- × Toolbox meetings
- × Confined space entry permits
- × Silica exposure prevention plans
- × Fall protection plans
- × Site attendance records
- × Site indoctrination/orientation forms



- × Safe Work Procedures (SWP's)
- × Geo-technical memos
- × Traffic Management Plans

-All must be filed and available for reference and review at head office for a period of no less than three (3) years.



Orientation for New or Young Workers

R4 will ensure that before a young or new worker begins work in a work place, the young or new worker is given a health and safety orientation and training specific to that work place.

Young worker is defined as any worker under the age of 25 years of age

A new worker is defined as any worker who

- new to the workplace
- returning to a workplace where the hazards in that workplace have changed during the workers absence
- affected by a change in the hazards of a work place or
- relocated to a new workplace where the hazards in that workplace are different from the hazards in the workers previous workplace

All subcontractors shall undergo appropriate safety orientation prior to commencing work.



Personal Protective Equipment (P.P.E.)

This is the last option used to protect workers from hazards. P.P.E. is selected according to the hazards present and workers should be trained on the proper use, care and limitations of the equipment.

Respiratory Protection Program

The purpose of this program is to adequately protect the health of all employees coming into contact with hazardous atmospheres and in compliance with Section 8 Personal Protective Equipment, of WorkSafeBC's Regulations for Respirators 8.32 and following.

Policy

R4 is committed to maintaining a work environment that will not adversely affect the health, safety, and well being of all of its employees, visitors and contractors.

1. Respiratory hazards at R4 are primarily eliminated through the use of engineering controls where feasible. For situations where engineering controls are not feasible, respirators will be used for protection from inhalation hazards.
2. Work related activities requiring respirator use shall be conducted in accordance with the provision of Section 8 of WorkSafeBC OH&S Regulation pertaining to Respiratory Protection.
3. R4 shall provide each employee required to use respiratory protection with training on the safe and proper way to use respirators, respiratory fit testing, and respiratory protection equipment.
4. Every employee involved in R4's respiratory protection program shall have full responsibility for using respirators as instructed and in strict compliance with all provisions of this policy document.



RESPONSIBILITIES

Workers (Respirator Users)

- Wear appropriate respiratory protection at all times when performing tasks or working in an area where respiratory hazards exist;
- Inspect the respirator prior to each use in accordance with respirator training received;
- Clean, maintain, and store the respirators in accordance with training received and manufacturer's instructions;
- Perform a positive and negative pressure check after each donning of a tight-fitting respirator;
- Immediately report any damage or malfunction of the respirator to the supervisor;
- Immediately report any condition or change that may impact their ability to use a respirator safely;
- When using a tight-fitting face-piece respirator it must be clean-shaven and ensure that no object or material interferes with the seal or operation of the respirator.

Employer/Supervisor

- Identify all situations where respirators are required;
- Ensure that workers wear appropriate respiratory protection at all times in respiratory hazard areas;
- Conduct, in consultation with the Health and Safety Department, assessments for respiratory hazards identified;
- Provide workers with the appropriate respiratory protection ensure that health screening, training, and fit testing of workers are completed prior to assigning workers a task that requires a respirator;
- Ensure respirators are cleaned, sanitized, inspected, maintained, repaired



- and stored in accordance with training and manufacturer's recommendations;
- Ensure that respirator users are clean shaven and do not have any object or material that would interfere with the seal or operation of the respirator;
- Notify Health and Safety department of respirator user's concerns, changes in processes, equipment, or operating procedures that have impact on environmental conditions and respiratory protection requirements;
- Notify the Health and Safety department of incidents where the use of a respirator may have prevented or contributed to an accident or injury.

Program Administrator

- Evaluate new or modified processes in the workplace to identify potential respiratory hazards;
- Evaluate alternative methods of worker protection (i.e. substituting with a less hazardous substance, installing ventilation, etc.);
- Responsible for appropriate respiratory selection and ensuring equipment is readily available to workers;
- Ensure that all employees involved in the respiratory protection program (including new hires) receive appropriate training, annual fit testing, and periodic medical evaluations;
- Maintain all records required by the respiratory protection program.

Contractors

- All contractors of R4 requiring the use of respirators must demonstrate compliance with the requirements outlined in this program.
- Contractors must ensure that all their workers have received the appropriate respiratory training and that they have been fit tested for the use of the appropriate respirators.



- Before working in an area deemed to have a hazard atmosphere the
- safety department shall provide a copy of the program requirements

including the hazard assessment conducted for the area.

HAZARD ASSESSMENT

The need for a respirator is dependent upon the type of operations and the nature and quantity of the materials in use and must be assessed on a case-by-case basis.

In order to determine the presence of a respiratory hazard and to assist in selection of an appropriate respirator, the supervisor in consultation with the Health & Safety department shall conduct a hazard assessment of the work.

The hazard assessment of a respiratory program must take into consideration the following:

- Identification of contaminants (chemical, biological) that may be present in the workplace;
- Identification of physical states of all airborne contaminants
- Determination of the likelihood of inhalation of the contaminants;
- Measurement or estimation of the concentration of the contaminants;
- Determination of appropriate occupational exposure limit for each airborne contaminant
- Determination of whether the atmosphere is immediately dangerous to life and health (IDLH);
- Determination of the existence of adequate warning properties

Note: In the instances where exposure cannot be identified or reasonably estimated, the atmosphere shall be deemed as IDLH.



RESPIRATOR SELECTION

- Respirators will be selected based on the following criteria:
 - ▶ Health and safety of the worker and ability to wear a respirator
 - ▶ Review of the hazard assessment findings
 - ▶ Existing legislation and standards
 - ▶ Duration of worker exposure
 - ▶ Characteristics and limitations of respirators
 - ▶ Respirator protection factors
- Only accepted respirators shall be selected and used in accordance with *CSA Standard CAN/CSA-Z94.4-93, Selection, Use, and Care of Respirators*.
- Supervisors in consultation with the Health and Safety department shall select respirators.
- Workers shall be issued only those respirators for which they have been fit tested and medically approved to wear.
- For air-purifying respirators for gases and vapors with no-end-of-service life indicator, the supervisor shall establish a change-out schedule for the replacement of cartridges. The supervisor will liaise with the Health and Safety department to assist with setting up a change-out schedule as required.
- Where an IDLH atmosphere is identified only a self-contained breathing apparatus (SCBA) or a combination supplied air respirator with auxiliary self-contained air supply, with a maximum rate service time of 15mins shall be used.
- Atmosphere-supplying respirators to make use of compressed air for breathing shall meet the standards set out in CSA Standard CAN/CSA-Z180.1-00, Compressed Breathing Air and Systems.
- Atmosphere-supplying respirators that make use of ambient breathing air system shall have the air intake located



CAN/CSA-Z180.1-00, Compressed Breathing Air and Systems.

RESPIRATOR FIT TESTING

- All workers involved with the respirator protection program must pass an
- Appropriate quantitative or qualitative fit test when using a respirator with a tight-fitting face piece.
- A certified representative from Work Safe T Solutions, in Chilliwack, BC, shall conduct the fit testing.
- A fit-test shall be conducted (as per WSBC Reg. 8.40):
 - ▶ Prior to the initial use of a respirator
 - ▶ At least once a year
 - ▶ Whenever there is a change in respirator face piece, including the brand, model, and size
 - ▶ Whenever changes to the user's physical condition could affect the respirator fit.
- The worker shall be fit-tested with the same make, model, style and size of respirator to be used.
- The fit-test shall be performed **ONLY** on workers who are clean-shaven in the area where the face piece seals the skin.
- When a worker is required to wear other personal protective equipment (PPE), such as eye, face, head, and hearing protection during his/her course of work the same protective equipment must be worn during the fit-test to ensure that they are compatible with the respirator and do not break the facial seal.

TRAINING

- All workers whose work requires the use of a respirator shall receive the appropriate training and education in the use of the respirator selected for



that task.

- Workers should receive training prior to the initial use of the respirator.
- The training shall include the following:
 - ▶ Why respiratory protection is necessary;
 - ▶ The limitations and capabilities of respiratory equipment;

 - ▶ Respiratory hazard assessment;
 - ▶ Reasons for selecting a particular type of respirator;
 - ▶ How to inspect, don and remove a respirator, and how to perform positive and negative pressure user checks;
 - ▶ Procedures for maintenance and storage of respiratory equipment;
 - ▶ How to recognize medical signs and symptoms that may limit or prevent the effective use of the respirator;
 - ▶ General requirements of the Respiratory protection program
- Refresher training shall be provided every year to all respirator users.
- Records of training shall be updated and maintained by the Health and Safety department.
- Training in the use of self-contained breathing apparatus (SCBA), if required, shall be provided by a qualified trainer.

PROCEDURES FOR THE USE OF RESPIRATORS

- Prior to being assigned any task that requires the use of a respirator the worker shall complete training and fit-testing requirements, and complete a health screening criteria (if required).
- Workers with facial hair that may interfere with the face piece seal or interferes with the safe use of the respirator shall not be allowed to enter the dangerous atmosphere with that respirator.
- Other pieces of personal protective equipment worn must not interfere with the seal of the face piece to the face of the worker.



- Side arms on corrective eyewear or any other material such as hair, cloth, straps and jewelry shall not pass between the face and the seal of the face piece, must not be allowed to interfere with the seal of the face piece to the face, or with the operation of the respirator. Note: Workers who must wear corrective eyewear where the eyewear interferes with the seal of the respirator shall reassess the respirator selected to accommodate the corrective eyewear and ensure a respirator seal is attained.
- The worker shall check the seal of the face piece immediately after putting on the respirator using the positive and negative air pressure technique. The worker must NEVER break the respirator-to-face piece seal to communicate.

Workers must NEVER break the respirator-to-face piece seal at any time while working in an IDLH atmosphere.

Worker's working in a hazardous area shall immediately leave the area for respirator-related reasons such as:

- Failure of respirator to provide protection

- Respirator malfunctions

- Worker detects an odor, tastes a chemical or air leakage around face seal

- Worker experiences increased breathing resistance

- Worker becomes ill or experiences dizziness, nausea, weakness, difficulty breathing, sneezing, fever, chills, confusion, etc.

- Worker experiences extreme discomfort from wearing the respirator

- Worker needs to wash his/her face and face piece to minimize skin irritation

- Respiratory equipment components (including fresh air supply) or devices require change out or maintenance.

The respirator must NEVER be altered in any manner.



All cartridges and components used by a worker shall be from the same manufacturer as the respirator (e.g., use only MSA or NORTH cartridges and parts for a MSA or NORTH respirator).

Where respirators are used for confined space entry procedures the appropriate legislation, regulations and standards shall be complied with.

CLEANING, INSPECTION, MAINTENANCE, AND STORAGE OF RESPIRATORS

Maintenance

- R4 will provide every worker requiring a respirator with a respirator that clean, sanitary and in good working order.
- Workers must report defective or non-functioning respirators to the supervisor immediately. These respirators will be tagged and removed from service by the supervisor until repaired or replaced.
- Each worker using a respirator is required to properly maintain his/her respirator to retain its effectiveness according to the respirator's manufacturer instructions. See Appendix for procedures for Respirator Maintenance. Maintenance shall include:
 - ▶ Inspecting and testing
 - ▶ Cleaning and sanitizing
 - ▶ Proper storage when not in use

Cleaning

- The respirator shall be cleaned and sanitized according to the respirator manufacturer's instructions and/or according to procedures found in this program for respiratory maintenance
- The frequency of cleaning shall depend on how often the worker uses the respirator and what it is used for:



- ▶ Respirators issued to employees must be cleaned and disinfected before each use to maintain proper hygiene
- ▶ Respirators designated for emergency use only must be cleaned and disinfected after each use

Inspection

- The worker assigned to use a respirator shall inspect the respirator before and after each use. See Appendix for procedures for Respirator Inspection.
- Maintenance personnel in accordance with manufacturer's requirements shall inspect all supplied-air compressors and its components.
- Supervisors will conduct checks of respiratory protection equipment on a pre-determined schedule to ensure that employees are inspecting them prior to use.
- Employees shall report any defects or non-functioning respirators found to his/her supervisor immediately. The respirator will be tagged and removed from service by the supervisor. Defective or non-functioning half masks shall not be repaired but will be disposed of and replaced.

Storage

- Workers will store their respirators in a clean and sanitary location in boxes or plastic bags, marked with each worker's name. The respirators shall be stored in a manner that will protect them from dust, sunlight, heat, extreme cold, excessive moisture, damaging chemicals, oil and grease, or any other potential hazard that may have a damaging effect on the respirator.
- Used cartridges or filters to be reused shall not be stored with the respirator, or in manner that would facilitate contamination of the respirator face piece.



PROGRAM EVALUATION

- The Health and Safety department shall review the Respiratory Protection Program annually.
- The review of the program shall include:
 - ▶ A review of program elements against current regulatory requirements
 - ▶ A review of definitions of roles and responsibilities

 - ▶ A review of documented program procedures
 - ▶ An examination of records to verify that documented procedures are being followed
 - ▶ Confirmation that workplace practices comply with program requirements
 - ▶ Documentation of performance issues and subsequent resolution or corrective action plans
 - ▶ A review of worker input and feedback (i.e. comfort, ease of use, fatigue, vision, mobility, and job interference, utility to verify worker acceptance of Respiratory Program requirements
 - ▶ Adequate training of all stakeholders
 - ▶ Ensure adequate selection, inspection, use, care and maintenance.
- The Health and Safety department shall review any medical information received from workers, where applicable.



Hand Protection

PURPOSE

This standard supports the Personal Protective Equipment Program and establishes when the use of hand protection is required for work at R4.

POLICY

All R4 employees may be exposed to hand injuries from grinding, welding, cutting, allied processes and corrosive products. Hand protection worn by R4 employees, shall be of a type, style and condition that will not expose them to preventable hazards. Hand protection worn by employees shall be worn as prescribed. This policy applies to all employees and contractors at R4 facilities and all R4 employees working off-site.

CORPORATE PROCEDURES

Job Specific Hand Protection Requirements:

If any of these specific requirements are deemed to make a task higher risk, a review of that specific use may be reviewed with a Supervisor or Safety Representative.

- **Welding:** Employees working in welding, cutting or allied processes must wear leather welding gloves.
- **Grinder:** Employees grinding on a pedestal grinder must wear nitrile gloves.
- **Belt Sander:** Employees belt sanding must wear provided leather gloves.
- **Sandblaster:** Employees working in sandblast must wear coarse leather gloves.
- **Paint Spraying:** Employees working in the paint booths must wear latex/rubber gloves.
- **Maintenance:** Employees working in the maintenance department must wear work gloves specific to the tasks being carried out.



- **Handling corrosive materials:** Employees handling corrosive materials must wear parts wash PVC gloves.
- **Machine Shop:** Employees working in the machine shop must wear nitrile gloves.

RESPONSIBILITIES

Management will:

- Ensure appropriate workplace evaluations are conducted in accordance with BC OSHR 8.4;
- Support the hand protection policy from all levels of management.

Supervisors will:

- Ensure that appropriate hand protection is available to all workers;
- Ensure the appropriate hand protection is worn when required;
- Address non-compliance to the program through immediate corrective action.

Employees will:

- Use hand protection in accordance with training and instruction;
- Inspect gloves before use;
- Report any equipment malfunction to their supervisor or employer;
- Maintain and store supplied hand protection in accordance with training and instruction.



Safety Footwear

PURPOSE

This standard supports the Personal Protective Equipment Program and establishes when the use of safety footwear, is required for work at R4.

POLICY

At R4 employees and contractors alike may be exposed to slipping, uneven surfaces, crushing potential, puncture hazards and corrosive substances.

Safety footwear worn by R4 employees and contractors shall be of a type, style and condition that will not expose them to preventable hazards.

Footwear worn by employees and contractors must be of a non-slip sole and display the green CSA triangle. This policy applies to all workers and contractors at R4 facilities and all R4 employees working off-site.

CORPORATE PROCEDURES

Job Specific Requirements

When working within production facilities, safety footwear must be at least 20 cm high and provide adequate ankle support and be worn tight fitting around the ankle.

RESPONSIBILITIES

R4 will:

- Ensure appropriate risk assessments are conducted in accordance with BC OSHR 8.22(2);
- Support the footwear policy from all levels of management;
- Support the footwear policy through the human resources policy on personal protective equipment;
- Address non-compliance to the program through immediate corrective action.



Supervisors at R4 will:

- Ensure that employees are wearing appropriate footwear in production areas and the general yard.
- Ensure safety footwear is worn properly where required.
- Enforce non-compliance to the safety footwear standard through progressive discipline.

Employees will:

- Wear appropriate footwear as prescribed in this policy;
- Ensure tread is sufficient on the sole of the boot to prevent slipping hazards;
- Inspect boots for wear to ensure steel toes are not exposed.

Eye and Face Protection

PURPOSE

This standard supports the personal protective equipment policy and establishes the guidelines for use of eye and face protection in various areas at R4.

POLICY

Eye and face protection shall be worn whenever an individual is exposed to the threat of eye injury from contact with sharp, blunt, or moving particles, or hazardous substances. This standard applies to all employees, visitors and contractors who may be exposed to a risk of eye injury while on R4 premises. The use of eye protection is mandatory in all production, yard and warehousing areas.

CORPORATE RESPONSIBILITY

R4 will:

1. Ensure adequate eye and face protection is made available to its employees, visitors and contractors;



2. Ensure equipment is selected in accordance with regulation and national standards; and
3. Ensure its workers, visitors and contractors are trained and instructed in the proper use of eye and face protection.

Supervisory Responsibility

Supervisors at R4 will:

1. Ensure eye protection and face shields are available to workers;
2. Ensure eye and face protection is properly worn by workers when required; and
3. Ensure eye and face protection is properly cleaned, inspected, maintained and stored.

Employee Responsibility

Employees will:

1. Use eye and face protection in accordance with training and instruction;
2. Inspect the equipment before use;
3. Report any equipment malfunction immediately to a supervisor or manager.

CORPORATE PROCEDURES

Safety Glasses

1. Employees shall wear eye protection which meets or exceeds the CSA Standard Z-94.3 whenever they are exposed to the potential dangers of hazardous they are exposed to the potential danger or hazardous substances or flying particles.
2. Eye and face protective devices shall not be used as substitutes for a machine guard or other engineered controls.



3. Employees who wear contact lenses shall continue to do so in conjunction with appropriate protective eyewear.
4. When working on live electrical equipment, non-conducting frames with scratch resistant polycarbonate lenses or CR-39 (plastic) lenses with ultraviolet (UV400) protection are acceptable in all light conditions.
5. Users of safety eyewear shall be instructed in the use, limitation and maintenance of the eye protection, and eyewear cleaning procedures. Supervisors shall facilitate this training as required.
6. Departments shall provide CSA-approved protective glasses to employees, visitors and contractors.

Prescription Safety Glasses

1. Regular eyeglasses must not be used in place of protective eyewear. Safety glasses must be worn over regular eyeglasses to protect against potential eye hazards. Alternatively, prescription safety glasses may be used.
2. Prescription safety glasses must meet the requirements of CSA Standard Z94.3-92.
3. Bifocal and trifocal lenses must not be used if there is a danger of impact unless they are worn behind impact rated goggles.
4. Where there is no danger of impact, workers may use prescription lenses made of treated safety glass.
5. Where necessary, subject to workplace conditions, prescription safety glasses must be fitted with side shields. If this is not practical a face shield must be worn over prescription glasses.

Face Shields

1. Face shields worn alone are not protective eyewear. Face shields do not fully enclose the eyes and are to be used in conjunction with primary eye protection such as safety glasses or goggles. The use of a face shield is



required when an employee performs a task where the normal use of safety glasses does not provide adequate protection.

2. Face shields must be worn for all grinding activities, including:
 - a. bench grinders;
 - b. wire wheels; and
 - c. die grinders.
3. Supervisors may require workers to use face shields for other activities, such as:
 - a. Using any air or power tools with the purpose of smoothing plate or reaming pipe;
 - b. Using hand tools such as a hammer and chisel to chip, punch or break an item; and
 - c. When using compressed air to clean material or a work area.

Welding Helmets

Welding helmets are used when welding or working with molten materials. They are designed to provide protection to the face and front of the neck from heat, glare, weld spatter and impact hazards.

Hi-visibility Clothing

PURPOSE

This standard supports the Personal Protective Equipment Policy and establishes when the use of high visibility clothing, is required for work at R4.

POLICY

High visibility clothing shall be worn whenever a worker, visitor or contractor is exposed to the hazards of moving vehicles and mobile equipment. The purpose of wearing high visibility clothing is:

- To signal the user's presence visually; and



- Provide the user with high visibility in hazardous situations under any light condition and under illumination by vehicle headlights.
- To ensure pedestrians are highly visible to equipment operators in the vicinity of mobile equipment at R4.

CORPORATE PROCEDURES

- Health, Safety and Environment will conduct hazard identification and risk analysis to determine if high visibility clothing is required.
- The High Visibility clothing worn shall meet the requirement of *WCB Standard Personal Protective Equipment Standard 2-1997, High Visibility Garment*.
- High visibility clothing shall be worn when exposed to hazards presented by vehicular traffic and/or mobile equipment.
- High visibility clothing shall be required for all work on or near roadways or highways as required by this standard.
- High visibility clothing shall also be required where work place hazards require that workers be visible and easily identified.
- Corporate Safety shall establish the high visibility clothing specification.
- All rain wear/specialty clothing shall meet high visibility specifications.
- High-Visibility Clothing shall be worn as an outer most layer of all clothing worn in the workplace.

Maintenance:

- High visibility clothing shall be kept clean in order to maintain a high visibility level; and
- Read the label on the protective garment and follow manufacturer's specifications for cleaning (i.e. laundering or dry cleaning).



RESPONSIBILITIES

Corporate Responsibility

1. Ensure adequate high visibility apparel is made available to its employees, visitors and contractors;
2. Ensure high visibility apparel is selected in accordance with regulation and national standards.

Supervisor Responsibility

1. Ensure high visibility apparel is available to workers;
2. Ensure high visibility apparel is properly worn by workers when required;
3. Ensure high visibility apparel is properly cleaned, inspected, maintained and stored.

Employee Responsibility

4. Use high visibility apparel in accordance with training and instruction;
5. Inspect the high visibility apparel before use;
6. Report any high visibility apparel malfunction immediately to a supervisor or manager.



R4 Safety Rules and Regulations

Access

All entrances, exits, and access to equipment, platforms, ladders, stairs, and building must be continuously maintained free of all obstructions. Access route for all emergency vehicles should not be blocked on any project.

Accountability

Each worker is responsible for his/her safety performance by complying with health and safety legislation and with established guidelines and procedures.

Contravention of a safety regulation could result in the worker being liable for a penalty prescribed and enforced under Provincial legislation in addition to removal from the employment of R4.

Alcohol/Unauthorized Drugs

Alcohol and unauthorized drugs are prohibited on R4 property and work sites. Any person whose ability is impaired by alcohol or illegal drugs will be refused entry or removal from the premises.

Personnel using a medically prescribed drug that may impair performance or judgment must inform their First Aid Attendant in order that tasks may be assigned to ensure worker safety is considered.

Asbestos

Asbestos may be present in some locations. If asbestos is suspected, all work affected is to be suspended and the R4 foreman immediately notified.

Special procedures are required when working with or around asbestos



Beards/Hair

Workers must not wear excess facial hair when the nature of the work requires or may require the effective use of self-contained breathing apparatus.

Long hair that may catch in equipment or other facilities must be appropriately netted or secured to prevent entanglement.

Boom Trucks

Experienced operators shall only operate all boom trucks.

A tag line must be used to control the load and a proper signalman directing.

Never climb or stand on the boom to conduct work or remove sling straps.

Ensure loads are within the lifting capacity of the boom truck and all cables, chains and equipment are in good condition.

Cleaning

Approved cleaning agents are to be used.

The use of gasoline or similar materials capable of giving off hazardous vapors at normal atmospheric pressures are prohibited for cleaning clothing, carpets, floors, motors, engines or other equipment.

Compressed Air

Compressed air must not be used for cleaning clothes or directed towards any part of the body.

Ensure that connections are secured with wire to prevent hoses from striking someone should they uncouple.

Compressed Gas Cylinders



Compressed gas cylinders must be secured in an upright position.

Compressed gas cylinders (full or empty) must be disconnected, cylinder caps installed and secured in an upright position when not in use or during transport.

Contact Lenses

Contact lenses must not be worn during any work that could expose the wearer to chemicals, gases, vapors, dust or other materials that may harm the eyes or cause irritation. The use of contact lenses may result in complications in the event of an eye injury.

Contact lenses must not be worn when using self-contained breathing equipment.

Cranes

Ensure that crane operators are certified and know provincial and local safety rules.

An experienced signalman is required during all lifts.

Slings, cables and chains shall be examined and tested prior to a lift. This should also include blocks and shackles.

Lifting around or close to power lines shall be discussed prior and special precautions taken to reduce potential risk of shock hazard.

Drinking Water

Approved containers used to store drinking water must be clearly marked and must not be used for any other purpose.

Electrical Power Sources



No work may be performed, no material piled, stored or handled, no scaffolding erected nor dismantled nor any tools, machinery or equipment operated in close proximity to electrical power sources where contact or arcing may occur.

All electrical systems must be de-energized and the controls locked out in accordance with Occupational and Health and Safety Regulations.

Temporary wiring is prohibited.

Only certified electricians shall work on electrical systems and equipment.



Emergencies

An emergency response plan will be developed at each site prior to commencing work

Report all emergencies (fire, spill, serious injury, serious illness, etc.) to the R4 first aid attendant, supervisor, foreman or Safety Officer.

Emergency telephone numbers must be posted at each job site adjacent to the phone. R4 will ensure that all the workers are familiar with these numbers and that the telephone is accessible at all times for emergency use.

Emergency Action

All personnel must be informed and aware of the emergency procedures established for the work site and their required response.

In the event of a fire or serious injury to a worker all qualified employees are expected to take prompt action to render assistance in addition to making the emergency call. Use the available fire fighting equipment provided to extinguish a fire if possible. Once the fire fighting personnel and ambulance arrive proceed with your normal or emergency duties.

Immediately following an emergency or near miss, all workers must report to the Forman to be accounted for and receive any instructions necessary to prevent further mishaps.

Emergency Vehicles

All vehicles and personnel must give emergency vehicles and response crews the right of way.



Equipment

Equipment, such as trucks, cranes, welding machines; etc must be maintained in good working condition in accordance with the manufacturer's specifications.

All equipment and tools used by workers must be suitable for the work and the work environment.

No equipment may be modified or altered to perform differently than intended unless written agreement by the manufacturer or certification from a registered Professional Engineer is obtained.

Equipment Operation

Only authorized personnel are permitted to operate, adjust or repair equipment.

No equipment should be left running or unattended.

Excavations

All excavations and trenches shall be prepared in accordance with Occupational Health and Safety Regulations and R4 procedures.

All excavations shall have appropriate entrance and exit routes in accordance with the nature of the excavation.

All open excavations or trenches shall be properly guarded by a substantial railing, taped off (red tape and delineators) or barricaded.

Flashing warning lights, appropriate to the area classification shall be installed as necessary.

All open manholes, removed gratings or floor openings must be guarded with proper barricades or appropriate covers.



Fire Fighting Equipment

Know the location of fire fighting equipment in your area.

Fire fighting equipment must be used only for its intended purpose and not removed from its place of storage.

Do not block access to the fire fighting equipment.

Ensure fire extinguishers are routinely checked and in good operating condition.

Fire Extinguishers

All workers must be familiar with the proper use of fire extinguisher equipment.

A minimum 20lb ABC chemical fire extinguisher shall be placed at all welding locations.

R4 shall supply sufficient fire extinguishing equipment to handle any anticipated emergency and ensure that the extinguishers charge is confirmed prior to each workday or shift.

Used fire extinguisher must be immediately identified and recharged.

Traffic Control Persons

Required when operations are such that signs, signals and barricades do not provide adequate traffic control. Only ticketed Traffic Controlled Persons will direct traffic. Appropriate reflective vests shall be worn by traffic control persons while directing traffic or controlling pedestrians.

Proper "Stop" - "Slow" hand held signs will be used when directing traffic.

Facilities

Temporary buildings such as trailers, field offices and similar structures may only be placed in areas approved by R4

Open electric or flame heaters are not allowed without the specific approval of R4



Falling Materials

When there is a danger of materials falling the area is to be barricaded against entry and warning signs prominently displayed. Protective canopies must be installed if this cannot be done.

Firearms

Possession of firearms by any person other than law enforcement personnel is prohibited on R4 property or job sites.



Working alone or in isolation

PURPOSE

This policy provides measures to protect the health and safety of, and minimize risk to, any employee that works alone or in isolation where assistance would not be readily available to the worker.

POLICY

1. R4 must ensure a procedure for assessing working alone activities and site-specific working alone plans are developed, implemented, communicated and enforced. These activities can also include hazards while working:
 - At Height
 - In confined spaces
 - With electricity
 - With hazardous substances or material (i.e. Paint Booths, Sandblast Booths etc.)
 - With hazardous equipment
 - With materials at great pressure
 - In the yard where employees will be excluded from all other surrounding activity
2. Supervisors shall review each work area under their control to identify employees who work alone.
3. Occupational Health and Safety committee and representative consult with the supervisor and employee, who will be working alone, to assess the conditions under which the employee is working, determine potential hazards and ways to minimize them, establish a means and schedule for communication with a contact person and provide for assistance in an emergency situation.
4. A Risk Assessment will be conducted and documented to determine the level of risk for the activity the employee will be doing.



5. This Risk Assessment will be reviewed by all employees conducting this activity and signed and dated along with the employees shift supervisor.

RESPONSIBILITIES

R4

- Ensure all supervisors and employees are trained and aware of the hazards, controls and procedures for working alone or in isolation.

Supervisor

- Conduct a hazard assessment to identify existing or potential safety hazards in the workplace associated with working alone
- Implement safety measures to reduce the risk to employees from the identified hazards
- Notify the First Aid attendant on that shift that an employee is working alone within their location.
- Ensure that employees have an effective way of communicating with their shift supervisor and first aid attendant in case of an emergency situation
- Regularly contact the employee at intervals appropriate to the nature of the hazard associated with the employees work.
- Provide training to all employees that will be working alone and ensure they understand what is expected in an emergency situation and they cannot be contacted.

Employee

- Participate in work site risk assessments and the implementing of procedures to eliminate or control hazards of working alone.
- Inform their supervisor and First Aid attendant prior to working alone



- Ensure an effective way of communicating with their shift supervisor and First Aid attendant is available before commencing work in case of an emergency situation
- Report all work site incidents immediately to their supervisor as required
- Report to the shift supervisor and the First Aid attendant when leaving or are no longer alone performing their job

Occupational Health and Safety

- Develop procedures for supervisors and employees for working alone or in isolation
- Joint Health and Safety Committee consult with supervisors, employees and First Aid attendants to ensure understanding and continued compliance
- Distribute procedures for supervisors to communicate with employees before implementing and continually enforcing.
- This procedure will be reviewed annually in conjunction with the Joint Health and Safety Committee to ensure compliance and safety of all employees working alone or in isolation

PROCEDURES

1. Prior to commencing any work in isolation, a risk assessment is to be conducted to identify any existing or potential safety hazards that are present.
2. If possible, avoid having lone employees when recognized risks are very high and introduce working in pairs.
3. Review findings with Joint Health and Safety Committee Representatives, Supervisors and employees must analyze their findings and implement procedures to ensure every measure is taken to eliminate or minimize the hazards and risks of working in isolation.
4. Supervisor and employee must notify the First Aid attendant on that shift that they are working alone.
5. A radio must be provided for the employee to have on them at all times.



6. Establish Check-In procedure to ensure regular contact is kept at 30 minutes intervals between Supervisor / designated co-worker and the employee, either verbally or visually, while they are working.
7. Report all situations, incidents, 'near misses' or safety concerns for continual monitoring of hazards present. Analyze and implement any improvements that can be made.
8. The employee must ensure to report to the shift supervisor and the First Aid attendant when they are leaving or are no longer alone performing their job.



First Aid

Ensure first aid capabilities as required by applicable Government Health and Safety Regulations

A trained First Aid Attendant will be on hand to administer first aid as required.

A first aid kit shall be located within easy access on all projects and stocked appropriately.

Emergency telephone numbers shall be posted on the site beside the phone.

Fuelling

All gasoline, diesel and propane powered engines shall be shut off during refueling.

Fuels shall be dispensed with a pump and hose.

All fuel shall be stored in approved containers and properly labeled.

Grinders

Hand grinders shall not be altered or used as bench grinders.

Appropriate grinding wheels matched to grinder speed shall be used.

Safety glasses and face shields shall be worn when grinding.

Guards

All protective guards for equipment and portable tools must be used as intended by the manufacturer.

All open manholes, removed gratings or floor openings shall be guarded with barricades or appropriate covers.



Provide warning signs for falling and tripping hazards.

All stairs having more than four risers shall have handrails.

Guy Wires

Hanging a sign from the wire warning of low clearance shall identify Guy wires erected.

Hazardous Materials

Hazardous materials are any material that may cause injury or illness through

- a) Skin contact
- b) Inhalation
- c) Ingestion (swallowing)

Skin contact with all hazardous materials must be avoided. The severity of the injury is generally proportional to the length of exposure contact. Get immediate medical attention and report to the foreman when it is safe to do so. Contaminated clothing must be removed and not worn until properly cleaned.

Information regarding hazardous materials used, manufactured or stored by R4 in the facility will be supplied.

Hazardous materials placed in containers must be labeled with the name of the materials and stored in approved locations.

Removal, cleaning or dismantling of any equipment which may have contained leaded products require special written procedures prepared by R4.

Heaters



Propane heaters should meet CSA approval and must be inspected prior to use.

The use of open flame heater units must have approval from the R4 foreman.

Ensure no combustible material is in close proximity to open flame heaters.

Electrical heating units should have temporary wiring inspected by a qualified electrician.

Horseplay

Startling, scaring, pushing, distracting, fighting etc is strictly forbidden on any R4 work site.

Hot Work

Any work performed which involves a flame, spark or source of ignition should be discussed with the R4 foreman and a procedure established to outline work practices facility operations.

Precautions taken to reduce the risk of fire shall always be considered prior to job start.

Housekeeping

A clean and orderly site will reflect the safety attitude of the workers.

All equipment, tools and unused materials at a job site must be returned to their proper storage area.

All waste material must be appropriately disposed of in a designated location.

Store all materials in their proper place when not in use.

Keep all walkways, doors, stairs and platforms free of obstructions.



Clean up all spills immediately.

Observe good housekeeping practices at all times and maintain the work area free of combustible/flammable materials and tripping hazards.

Store all waste or rags in closed metal containers.

Ensure waste containers are emptied when full.

Nails must be removed from all lumber prior to storage or disposal.

Knives

Any knife must be used carefully and not as a screwdriver or pry bar.

Knives (when needed in the work process) must be carried in a protective sheath.

Ladders

Metal or wire reinforced ladders must not be used in close proximity to electrical equipment and overhead wires.

All ladders must be inspected and found to be free of defects prior to use.

Ladders must be equipped with non-slip devices or safety footpads.

Ladders must be secured at the top or held by a second person to prevent movement during use.

The base of an inclined portable ladder shall be no further from the base of the wall or structure than 1/4 the length of the ladder, measured from the point at which the ladder contacts the wall or structure.



When sections of an extension ladder are extended, the overlap between ladder sections shall not be less than 3' for ladders up to 36.'

Do not stand on, or work from, the top two rungs of a ladder.

Stepladders shall be fully extended when in use.

Face the ladder and use both hands while climbing or descending.

Barricades are to be installed in all areas where there is a hazard created by traffic moving near or around the ladder setup position.

Tools shall be carried in a pouch or lifted by a hand line or lifting device when ascending or descending ladders.

Ladders shall be appropriately stored and made secure.

Language

Where a worker cannot read or understand English, the foreman is responsible for ensuring that they thoroughly understand the safety regulations and all other pertinent safety requirements.

Where a worker has a communication problem, special procedures shall be developed to ensure they can perform their work in a safe manner and that they can be made aware of emergency situations.

Lifting/Material Handling

Do not lift more than can be safely handled. Get help.

When manually lifting a heavy object, bend the knees, keep a straight back and use your legs to lift the load.

Use mechanical equipment wherever practical for heavy objects.



Only authorized personnel are permitted to operate material hoisting equipment.

Safe lifting loads are marked on lifting devices and shall not be exceeded.

All hooks on lifting equipment must have the safety latch in place.

All mechanical lifting operations must comply with the Occupational Health and Safety Regulations.

Persons must not stand or pass under any suspended load.

No person must be lifted by crane, forklift or other equipment not intended as a personnel lift device. Special personnel lifting equipment must be used.

Always use a tag line and ensure a signalman is present and can be seen.

Lighting

All electrical facilities temporary or permanent shall comply with the requirements of the Canadian Electrical Code and applicable Provincial regulations.

Temporary lighting shall be suitable for the work being conducted with cords and cables suitably strung to prevent tripping, or entanglement.

All temporary lighting shall be equipped with proper guards to prevent accidental contact with the bulb.

Machinery

Guards shall be placed on machinery to prevent contact with moving parts.

Guards shall not be removed except when the machine is shutdown and locked out. Guards shall be replaced before machinery is put in operation



Machines must be shut down, locked out and tagged before any repair work is done. This includes electrical, air, steam or other driven equipment.

Working over moving machinery is prohibited unless adequate protection is provided.

Marking Physical Hazards

Physical hazards shall be identified and marked in accordance with the requirements of the American National Standards Institute Z 35.1 “Specifications for Accident Prevention Signs” and the International Organization for Standardization R.557 “Symbols, Dimensions and Layouts for Safety Signs”.

Nails

Exposed nails and spikes must be removed or bent flat.

Discarded nails shall be properly disposed of and not left on the ground or other surfaces.

New or Infrequent Jobs

All new, infrequent or high-risk jobs shall have a pre-job review and approved procedures developed and warranted.

Noise Protection

Suitable hearing protection such as muffs or plugs shall be worn while working in areas posted with hearing protection signs or when required by the nature of the work being performed.

Judgment may be required as to the noise level in areas not posted. If there is any uncertainty, ***hearing protection must be worn.***



Occupational Health and Safety Regulation

A copy of the OH&S Regulations shall be retained at each work site and made available to all workers.

Overhead Electrical Power Lines (Limits of Approach)

Before any work is begun, the employer and employees shall investigate and be aware of any overhead electrical power or telephone lines.

No worker is permitted to operate equipment or be closer than six meters to power lines unless the work plan is in accordance with OH&S Regulations and has been approved by an authorized person.

Parking and Job Access

Workers should use proper entrances and routes in proceeding directly to the work site and avoid passing through operating locations.

Personal Protective Clothing

Wear appropriate protective clothing suitable for the task to cover and protect the body. (Site has defined P.P.E. Standards).



The Right to Refuse Unsafe Work

R4 Contractors mentor each one of its workers on the right to refuse unsafe work, Never carry out or cause to be carried out a work process, or operate or cause to be operated any tool, appliance or equipment which would create an undue hazard to your health or safety or to the health or safety of any other worker. (Undue hazard means a danger that is not normal for that occupation or a danger under which a person engaged in that occupation would not normally carry out his work)

1. You will *not* be disciplined for exercising this right
2. If you exercise your right to refuse unsafe work, you must immediately report the problem to your supervisor
3. Your supervisor will investigate and either correct the problem or inform you that the report was not valid
4. If there is not resolution at this point. The supervisor will reinvestigate in the presence of you or your selected alternative
5. If there is resolution at this point, your supervisor and you or your worker rep must notify WorkSafe BC who will then investigate.
6. Safe work BC will issue orders if deemed necessary
7. You may be temporarily assigned to alternative work at no loss in pay until the matter is resolved

Personal Protective Equipment

Ensure all personal protective equipment is in good working order prior to use.

Filter masks must be worn when handling such materials as lime, cement, grout, soda ash, rust scale, asbestos-containing material, or when performing any job that may create significant air borne dust or other contaminants.



Self-Contained Breathing Apparatus (S.C.B.A) must be worn whenever the job presents an exposure to harmful gases or vapors. Each worker required to wear S.C.B.A must be instructed and qualified in its use

Life jackets must be worn by workers within 6 feet of an unguarded exposure to a water hazard. This is to guard against the danger of drowning in water deep enough for the life jacket to be effective.

Foot and leg guards must be worn for all work where the lower part of the body is exposed to injury. Such work includes the use of chain saws, jackhammers, tampers/compactors, etc.

Wear goggles, face shield, rubber gloves, rubber suits when working on equipment in acidic, caustic or other similar hazardous material service

Long sleeved shirts, where required by OH&S. and long pants are mandatory at all times.

Do not wear neckties, loose sleeves, loose clothing, jewelry, rings, bracelets and necklaces that may be caught in machinery or other devices.

Portable Containers

Only CSA approved safety containers may be used to store gasoline and other flammable or combustible liquids

Only working quantities of flammable or combustible liquids may be present in working areas. Bulk or reserve quantities of such substances should not be present in working areas.



Portable Power Tools

Tools shall be suitable for the job being performed, in good condition and appropriate to the hazardous conditions that may exist during their use. Extinguishers and/or fire hoses should be on hand.

All electrical tools shall either be three-prong, grounded, double insulated, or rechargeable.

Keep guards in place on all power tools.

Air hoses and electrical cords should not be placed on walk and roadways unless precautions have been taken to prevent tripping, entanglement and wear.

Inspect couplings, hose and hose connections of pneumatic tools prior to use.

Verify the source of supply before connecting air-powered tools. Be sure it is industrial air, not natural gas, nitrogen etc.

Ensure air hose is connected to the equipment prior to turning on the air supply.

The air supply must be shut off when changing pneumatic roots. The air supply must not be shut off by kinking the air hose.

Disconnect power tools from power source before making repairs or adjustments.

Authorized personnel shall only operate powered tools.

Radios/Cell Phones

All communication devices are to be carried with an approved belt and holster. They shall be intrinsically safe.



AM/PM radios or portable cassettes are prohibited from use in the work areas, except when approved by the R4 foreman.

Railroads

Do not climb through, over, under or between railroad cars whether they are standing or moving. Keep a safe distance from the ends of cars and be alert for unexpected movement.

Do not pile materials, build scaffolds, park vehicles or erect any structure closer than 8 feet from the centre line of any railroad track.

Reporting Vehicle Accidents

Any worker having a motor vehicle accident on R4 property shall report the accident at once to the foreman. An accident report must be prepared and submitted to the R4 office.

Report vehicle accidents to third parties (i.e. customers, suppliers etc.) caused by any factors pertaining to the worker.

Respiratory Protection

R4 will arrange and supply proper respiratory protective equipment when required by the nature of the job being performed.

All workers using respiratory protective equipment shall be appropriately qualified.

Rigging

Riggers and signalman must be qualified to do the work.

Know the weight of the load to be lifted.

Ensure loads are properly rigged and stable during the lift.



Use tag lines when necessary before using

Replace worn equipment.

Never rig or hoist any load if weather conditions are such that hazards to personnel or property are created, ex; high wind velocity, low visibility, etc.

Ensure that the lift is not close to overhead electrical lines.

Running

Running is not allowed on R4 property or sites.

Safety Harness'

Full body harnesses must be used by workers when:

- a. Working at heights greater than 10 feet above grade or floor level, where it is impractical to provide adequate work platforms or staging complete with guardrails.
- b. Working over any operating machinery, open space or hazardous substance which cannot be guarded
- c. Occupying an elevated or aerial work platform.
- d. Entering a confined space where a harmful atmosphere exists or may develop, body harnesses will provide fall protection against injury

An engineered safety net must be used when fall protection and adequate work platforms are not practical.

Safety Classes / Goggles / Face Shields

Wear safety glasses with side shield or goggles whenever the nature of the job presents an eye hazard.



Wearing of safety glasses is strongly recommended as a general practice for those areas and tasks where safety glasses are not mandatory.

Hard Hats

CSA (non-conductive) approved safety hard hats must be worn by all workers in all work areas

Do not cut, score, notch or alter hard hats in any way as this may reduce their strength.

Safety Inspections

Site safety inspections will be regularly conducted during the course of the job by R4.

Safety Footwear

CSA approved steel toed and slip resistant safety boots or shoes shall be worn in all work areas.

Safety Showers & Eye Baths

R4 will provide approved temporary eye baths for areas not having safety showers and eye baths when required by the nature of work or by the OH&S Regulations.

Scaffolds

Scaffolds, swing stages or other temporary work platforms used for maintenance, installation or removal of equipment shall be constructed, maintained and used in compliance with the OH&S Regulations.

Scaffolds must be erected, maintained and dismantled under the direction of a qualified person.



Proper scaffolding should include toe boards and guard rails with adequate brace members.

Smoking

Smoking is prohibited except in designated areas.

Smoking in workplace vehicles is prohibited.

Obey all no smoking signs.

Spills

Clean up all spills or slippery surfaces.

Report all spills to the R4 foreman and call the emergency number provided.

Subcontractors

Shall be present during toolbox meetings and safety training sessions.

Shall wear required protective equipment and are familiar with emergency procedures.

Tie-Ins/Connection to Existing Facilities.

Workers must not open or make tie-ins to existing petroleum pipelines, equipment, sewer systems, electrical power circuits and other utilities without approval from the R4 foreman.

Tool Box Meetings

A toolbox safety meeting should be held weekly with all workers in attendance.

Minutes should be recorded and a copy submitted to the R4 Safety Manager.



Traffic

Speed limits (as posted) must be obeyed.

All street, railroad, warning and stop signs must be obeyed.

Passengers must never leave or board a vehicle in motion.

Vehicles parked on R4 property / job site must be left with the engine shut off and the parking brake set.

Vehicle drivers must check clearance and access way when parking, backing up and negotiating tight turns.

All vehicle accidents occurring on R4 job sites must be reported and an Incident Report prepared.

Underground Facilities

Locations of all underground facilities must be thoroughly reviewed with R4 and utility representatives before excavation has begun.

Extreme caution shall be exercised during excavations that are close to underground services since construction drawings may not be accurate.

Piping and other underground services must not be damaged during excavation. The R4 foreman must be advised of any damage immediately.

Vehicles and Mobile Equipment

Vehicle operators shall have a valid operator's license.

All vehicles must be maintained in proper working order.

All trucks and mobile equipment used at the work site are to be equipped with back-up audible warning horns or alarms.

Seat belts are mandatory.



For inspection requirements, see “Inspections”

Ventilation

Effective ventilation shall be maintained to ensure a proper air supply free of contaminants and impurities that would exceed safe exposures.

Forced ventilation systems will be required depending on the nature of the work.

An inadequate air supply will require the use of appropriate personal protective equipment.

Visitors

Workers are responsible for the safe conduct of their visits at the job site.

All visitors must undergo site-specific safety indoctrination prior to site attendance.

Welding

Inspect all welding or burning equipment before use for leaks and the presence of oil or grease.

Flash back preventers must be installed on the fuel and oxygen lines at the torch and regulators.

Safety glasses and face shields must be worn when cutting, chipping or grinding.

Suitable eye protection shall be worn by anyone assisting or working near a cutting, welding, chipping or grinding operation.

A fire hose or extinguisher shall be readily available at the work site as well as at welding machines.



Welding machines must be shut down prior to fuelling.

Remove all combustible materials a safe distance from the welding areas.

Welding areas must be set up far away from flammable vapors and fuelling areas.

Suitable shielding must be placed around welding and grinding areas to protect personnel in adjacent areas from flashing and flying particles.

Work Permits-General

No work may be done without written approval from the R4 foreman. The approval may take the form of a Safe Work Permit.

The R4 foreman will give detailed instructions governing the issuance of Safe Work Permits.

Under certain conditions, work areas may be declared “free areas” by R4.

Work Permits- Hot Work

The following operations are specifically classified as “hot work”: welding, burning, hot riveting, hot forging, use of electric hot plate, open fires of any kind, grinding, soldering, the use of any electrical arc or sparking device, the operations of gasoline and diesel engine driven equipment, including vehicles, non-explosion proof flood lights or any other such equipment.

Vehicles require a hot work permit to enter tank lots with product in tanks.

Ensure that combustible material is far removed and does not pose a fire hazard.

WHMIS Program



Purpose of Label

The WHMIS workplace label required on containers of hazardous products, physical hazards and hazardous waste is the most widely recognized information delivery system in the workplace. It is designed to provide employees and sub contractors with a single and sufficient, easily understood information of the risks involved and the precautions necessary to protect their health and safety and that of their coworkers.

The label also directs workers and sub contractors to the Material Safety Data Sheet (MSDS) where more detailed information can be found.

Pictograms

Figures 1 and 2 show the WHMIS hazardous symbols and an explanation of each pictogram.

WHMIS Hazard Symbols

Class A — Compressed Air

Class B — Flammable and Combustible Material work

3 Ensure that combustible material is far removed and does not pose a fire hazard.

Class C — Oxidizing Material

Class D — Poisonous and Infectious Material

- Materials causing immediate and serious toxic effects
- Materials causing other toxic effects
- Bio hazardous Infectious Material



Class E - Corrosive Material

Class F - Dangerously Reactive Material

Person Protective Equipment

Chemical Protective Mono-goggles

Face Shield

Apron

Disposable Dust Mask

Cartridge Respirator

Supplied Air Respirator

Hand Protection

Protection Chemical Footwear

Full Body Protective Clothing

MSDS Requirements

An MSDS must be available for every controlled product on the job site.

Workers and subcontractors working on site must have unrestricted access to all controlled product MSDS's.

Workers and specified subcontractors must be instructed on the content, purpose and significance of the MSDS and controlled product identification system used at the job site. WHMIS training records must be documented for workers.

Asbestos



Background

Asbestos is the term used to describe a group of naturally occurring fibrous mineral silicates. Three types of asbestos have been used commercially:

CHRYSTOLE - (White Asbestos) is the most commonly used form of Asbestos

AMOSITE - (Brown Asbestos) has been used in spray coatings, heat insulation products and in Asbestos cement products where greater structural strength has been required

CROCIDOLITE - (Blue Asbestos) is said to no longer be found in British Columbia. Before 1973 it was commonly used in spray coatings on structural steelwork as fire protection and for heat or noise insulation. It was also used in gasket materials and in cement pipe.

The most proactive way to protect against potential exposure to asbestos in building materials is to assume that if the product is not made of glass, wood or metal, or not manufactured after 1990, it may very well contain asbestos.

Health Concerns and Hazards

The properties of Asbestos are unique and are what lend it its hazardous characteristics. It's thin strand like fibers are microscopic in size, enabling it to become airborne and subsequently inhaled into the respiratory system. A key factor in the introduction into the respiratory system is how friable the asbestos or the asbestos containing material is.

Friability is; *"THE EASE AT WHICH A MATERIAL OR SUBSTANCE BECOMES PULVERIZED AND/OR AIRBORNE."*

Once inhaled into the respiratory tract, its fibers become embedded into the sensitive tissues deep within the lung where the exchange of oxygen into the

blood is intended to occur. The natural defense mechanisms of the body attempt to remove or "heal" out these foreign objects but being a mineral fiber



or, in effect, rock, the body's defenses are unable to breakdown the fibers, begin creating scar tissue around the fibers and over time, render the exchange of oxygen impossible in the affected areas. The body will continue to attempt the healing process and the scar tissue will continue to spread, depleting the patients' effective lung capacity.

Asbestosis is a chronic lung disease resulting from prolonged exposure to asbestos dust often resulting in scarring of the lung tissue as a result of the presence of fibers in the deep lung.

Lung Cancer may be caused by fibers in the lung. Causes of lung cancer are still unknown although it is thought by many researchers that the inhalation of asbestos fibers in addition to the inhalation of tobacco smoke greatly increases the development of lung cancer.

Mesothelioma is a form of cancer that affects the pleural sac that surrounds the lungs. This form of cancer is quite rare but is almost certainly deadly and claims its patients very rapidly. There is a strong link between Mesothelioma and asbestos exposure.

Provincial Legislation

The British Columbia Occupational Health and Safety Regulation outlines, the required legislated handling procedures and exposure control methods necessary for safe interaction with asbestos and asbestos containing materials.

Preparing for Encountering Asbestos

Where work is required to be carried out in areas where the potential for exposure to asbestos exists, various approaches can be considered in preparing workers to prevent exposure to asbestos and protect the surrounding areas and public from contamination and exposure.



Any work that is thought to have a potential for encountering asbestos, at any degree, will first be reported to WorkSafeBC by submittal of a Notice of Project Asbestos or an “NOPA”. This will be filed with the board no later than 24 hours prior to the commencement of the proposed work.

The provision of recent asbestos inspection reports or surveys, ACM survey(s) or any other documentation denoting the inspection of the work area for presence of asbestos containing materials, by the client will be required in the effective identification of hazard areas and materials, their specific locations and other pertinent information.

In the event that there is no existing documentation to address the required concerns, a survey will need to be conducted by a qualified, reputable environmental consultant that will comprehensively inspect the work area.

Emergency and Accidental Exposure Procedures

The ultimate goal of any contractor, in any field, is to achieve a zero accident or incident percentage upon completion of a project, as it is with R4. When the preferred outcome is not met, the following procedures will be followed closely.

Accidental Exposure Control Procedures:

When working in a low or moderate risk environment or areas where an unexpected discovery or disturbance of a suspected asbestos containing material has presented itself, leading to potential exposure to asbestos fibers, the following procedures will be followed:

- Once a worker or workers become aware of a disturbance possibly leading to an exposure, all work will be stopped, use of tools and or equipment potentially contributing to further aggravation of asbestos fibers will be stopped and a perimeter of the suspected disturbance area will be clearly established



- The workers at risk of an accidental exposure, if not already wearing respiratory protection, will immediately put on respiratory protection
- Wetting of the suspected disturbance area should be done with a water source using low pressure as not to aid the material in becoming airborne, in order to keep it moist and stirring of that material to a minimum, if not eliminated
- If the worker(s) is/are not wearing disposable, impervious coverings already, all of the clothing worn should be *wetted* using the same low pressure source used to dampen the disturbed material, *rolled off* of the person, and placed *directly into a sealable container or bag* suitable to contain and transport asbestos waste
- The worker will then be provided with disposable, asbestos fiber impervious coverings and proceed to an area close to the established perimeter of the exposure area for a final wipe down of the face, hands and respiratory protection before removing respiratory protection
- *Any clothing or coverings that have been potentially contaminated, should be laundered by a facility capable and accredited in dealing with asbestos contaminated fabrics or disposed of all together*

For disposal of asbestos containing material phone:

Envirovac Disposal, Mike Baker (mbaker@envirovac.com), 604-841-7694, 604-594-7490. They will pick up directly from job site and dispose.

Confined Space

Except as otherwise determined by the board



A confined space is an enclosed or partially enclosed area that is big enough for a worker to enter, but has a limited or restricted means of entry that may complicate first aid rescue and evacuation or other emergency responses. It is not designed for someone to work in regularly, but workers may need to enter the confined space for tasks such as inspection, cleaning, maintenance, and repair. This also pertains to small openings or layouts with obstructions that could make entry and exit difficult and could complicate rescue procedures.

Low-hazard atmosphere

An atmosphere that is shown by pre-entry testing or is otherwise known to contain clean, respirable air immediately prior to entry into a confined space, and that is not likely to change during the work activity.

Moderate-hazard atmosphere

An atmosphere that is not clean, respirable air but is not likely to impair a worker's ability to escape unaided from a confined space if the ventilation system or respirator fails.

High-hazard atmosphere

An atmosphere that may expose a worker to risk of death, injury, or acute illness, or otherwise impair a worker's ability to escape unaided from a confined space if the ventilation system or respirator fails.

IDENTIFICATION AND CLASSIFICATION OF CONFINED SPACES

Examples of confined spaces include, but are not limited to:

- Sewers
- Underground utility vaults and storage
- Manholes
- Sumps
- Pipelines



- Trenches or Excavations
- Ditches

Responsibilities

Management/Supervisory/Foreman

1. Supervisors must be familiar with the requirements of this program and ensure that employees or contractors under his/her supervision understand the general and specific procedures and know how to conduct their confined space tasks safely.
2. Each supervisor, with the assistance of R4, shall identify and instruct their employees regarding the recognition of confined spaces on an annual basis and as a part of new employee orientation.
3. Training records shall be sent to and then maintained by R4 for a minimum of three years. A training record form will be filled out by the employees taking the training signed by supervisor in charge and kept in the head office.
4. Supervisor shall inspect or coordinate inspection of monitoring equipment and maintain written records of such inspections.
5. Supervisory shall inspect permits maintained pursuant to this program.
6. R4 management will directly assist in any special Confined Space Entry, upon request by the supervisor. This may include but is not limited to a specific contaminant or large-scale project.
7. Each Supervisor shall effectively enforce compliance with these procedures, which may include the use of appropriate disciplinary action, for any violations or deviations from the procedures outlined in this policy.
8. Each Supervisor shall assure the equipment required for compliance with this procedure is in proper working order and made available for use by their employees.



9. Supervisor shall promptly investigate, report, and inform management of all on-the-job accidents or related health problems and, if required, send affected workers for medical treatment.
10. R4 Management shall ensure subcontractor confined space entry
11. Programs are reviewed and, where appropriate, approved if requested by supervisory personnel.
12. Supervisory personnel shall ensure that sub-contractors are informed of and adhere to our confined space program or the contractor's program if management has approved it.
13. R4 will assign overall responsibility of the R4 confined space program to an administrator. This person must be adequately trained to do so. The duties may be undertaken by one of the other employees or these duties given to another person whom also is adequately trained.



Education Checklist

All employees required to work in confined spaces, as well as those supervisors who authorize work performed in confined spaces shall receive appropriate instruction this shall include the following as applicable:

- Responsibilities under the Confined Space Program
- Potential Confined Space Hazards
- Identification and Classification of Confined Spaces
- Confined Space Entry Permit System (Employee Permit and Contractor Permit)
- Ventilation appropriate to hazards and confined space physical dimensions
- Air Monitoring equipment calibration/usage/care/maintenance
- General Procedures for Confined Entry, Work and Emergencies
- Specific Entry, Work and Emergency Procedures
- Sub-contractors who are contracted to perform work in confined spaces
- Lock-out in conjunction with client Safety Watch

R4 Confined space Instructors will be able to instruct and have a complete understanding of:

1. All types of confined spaces where R4 employees are working.
2. The hazards.
3. The exact work the men will be doing in the confined space and the procedures the men will be following while doing the work.
4. The right Ventilation for the job being done.
5. The safe limits for oxygen, flammable materials, and possible air contaminants.
6. All spaces that may require entry permits.
7. Duties and responsibilities of the supervisor of entry, workers entering the



space and standby person.

R4 Confined space employees will be able to:

1. Identify a confined space.
2. Identify harmful air contaminants and respond to air testing device.
3. Follow R4 confined space program.
4. Understand and implement entry permits (when used).
5. Proper use of Ventilation systems.
6. Communicate with standby person.
7. Follow isolation and lockout procedures.
8. Properly use personal protective equipment.

*Records of training is kept in the R4 head office



Traffic Control

Much of the work in confined spaces is done in heavy traffic areas this may require flagging personnel sawhorse barriers and cones. Lights may be required to be installed around openings. Flashing lights and warning signs may be required in a traffic area. A traffic plan or procedure and permits required if complete disruption of traffic is foreseen.

Atmospheric Monitoring

- A qualified person will fully understand the applications and limitations of air monitoring equipment and be trained in the proper operation, calibration and maintenance of it.

Testing a confined space with the atmosphere detector is done by attaching a sampler hose to the air monitor and placing the sampler down the manhole or confined space.

Pre entry testing needs to be done more than once and is required to be done at least 20 minutes before a worker enters the confined space. If the workers leave the confined space for any reason the confined space must be tested before they re-enter the space once the testing is done. The results must be posted at all entry points to the confined space.

Testing record will show:

- a. Date and time of the test
- b. Testers initials
- c. Concentration readings of vapors, gases or other conditions

R4 entry supervisor will insure that continuous monitoring is taking place whenever practicable to ensure the safety of the workers.

- When ever possible, test the atmosphere before opening hatches or starting ventilation. This will see if there is a potential of an explosive atmosphere or see if the area needs venting for a hazardous atmosphere. If it's not possible to test before.



- Opening up the space make sure you test before using ventilation mark down on your form what it is found in the confined space.
Entry and work in the space with respiratory protection for gases can occur only if the following conditions are met:



- **Entry**

<i>Oxygen:</i>	20.9 or 21.0%
<i>Flammable/combustible:</i>	0% of LEL
<i>Carbon monoxide:</i>	0% ppm
<i>Nitrogen dioxide:</i>	0 ppm
<i>Hydrogen sulfide:</i>	0 ppm

If these conditions are not met before entry, continue to ventilate the confined space for 10 minutes and retest. If these cannot still be met then the situation will require further evaluation and a call must be made to the head office.

Once entry levels have been established then the air detector must be watched with consistence (take a reading every 30 min,) If the air starts to change the numbers on the detector will start to change. Once this happens every precaution must be taken for the crew's safety. I.e. Remove crew from manhole until numbers return to acceptable limits.

The Alarm limits on the R4 confined space detector are:

<i>Oxygen:</i>	19.6% - 22.9%
<i>Flammable/combustible:</i>	5%
<i>Carbon monoxide:</i>	025 ppm
<i>Hydrogen sulfide:</i>	010 ppm

- Any work that can be done from outside the space must be done first.



- The initial pre-entry air-monitoring test must be conducted from outside the space using remote probes and sampling lines. Try to avoid disturbing the air in the space initially. For example, for electrical or mechanical service chambers (manholes), try to take a sample through a pick hole or through a slightly opened cover on the downwind side of the space.
- Test all vertical levels of the confined space starting with the top, middle and the bottom. Some contaminants will stratify, particularly if there is little
- Air movement. If only the top level is tested for example, an individual may be overcome by a “heavier-than-air contaminant” (such as hydrogen sulfide) near the bottom of the space. Also, check as much of the space’s horizontal area as possible. If any test shows the air to be unusual or unsafe, the hazard must be controlled before anyone enters the space.

Atmospheric monitoring Procedure must be followed:

- a) Monitoring equipment will be field tested by a qualified person
- b) Management will ensure employee(s) and a qualified entry person will be trained in proper methods and equipment for atmospheric testing.
- c) Atmospheric monitoring includes pre-entry atmospheric testing, and monitoring during work for:
 - i. Oxygen
 - ii. Lower explosive limits
 - iii. The minimum acceptable air quality prior to confined space entry is:
 - (1) Oxygen level: clean air contains 20.9%.
If the oxygen reading is less than 20.9% and this was unexpected then qualified person must investigate and ensure the space is safe to work in
 - (2) Combustible gas: concentration shall not exceed 0% of the lower explosive limit (LEL) for cold work and 0% of the lower



explosive limit (LEL) for hot work of any combustible material

existing or introduced into a confined space

(3) Carbon Monoxide (CO) -15min -100: 8hrs-25

- In performing the air monitoring, oxygen levels should be measured first, then flammables/combustibles and then toxins such as carbon monoxide and hydrogen sulfide. Testing for flammables/combustibles must be conducted after testing for oxygen is performed since many flammability meters won't work if the air is oxygen-deficient. Testing for flammables/combustibles will help make sure that the air in the space does not burst into flames. Do not accidentally use the flammability meter to test for toxicity because a non-flammable concentration of a chemical can still be highly toxic. Follow the manufacturer's instructions carefully.
- The air in a confined space is considered hazardous if the concentration of flammable gas, vapor, or mist exceeds 0% of the lower explosive limit (LEL). Once again, it is important to ensure that the meter is calibrated properly and regularly. Carefully follow the manufacturers instructions regarding the proper calibration, use and maintenance.
- All air monitoring results must be recorded on the confined space entry form
- Examples of stratification in a confined space:
 - a. Methane Gas (Lighter than Air)
 - b. Carbon Dioxide (Slightly Heavier than Air)
 - c. Hydrogen Sulfide (Heavier than Air)

14. Normal fresh air contains about 21% oxygen. A space is considered oxygen deficient if the oxygen level is below 19.5% and space is considered oxygen-enriched if the levels exceed 22%. To test the air correctly, it is necessary to know the equipment. Be familiar with the



operating procedures and know whether there are any limitations. Some instruments for example, give erroneous readings if the temperature or humidity is too high or low. Carefully follow the

instructions for safe and correct operation of the instrument.

14. Periodic or continuous air monitoring is necessary to make sure that the air stays safe for the occupant(s) of the space. If continuous monitoring is utilized, it shall be conducted throughout the duration of the work within the confined space and results recorded hourly on the forms at the entrance of the manhole. This must be done while workers are inside the confined space at intervals to ensure the safety of the employees inside.

Another important consideration is that the work performed inside the space may generate potentially hazardous contaminants. For example, grouting mixtures and cement coatings can cause severe skin and eye irritants.

15. If the air in a confined space becomes unsafe after entry – for example, an equipment alarm goes off, an occupant feels sick or is acting in a strange manner – stop all work immediately, get out of the space and evaluate the situation from outside the space. After evacuation, the hazard must be controlled. If hazard is atmospheric, mitigate risk through additional ventilation. Continue ventilating the confined space for 10 minutes and then retest. The re-testing must be done 20 minutes before entering the manhole and then tested at regularly intervals.
16. If for any reason an acceptable reading cannot be achieved then all employees must stay out of the confined space and a re-evaluation must be taken.



Hazard Assessment

Before entering a confined space R4 will have in charge a qualified person as the person in charge of supervision of the confined space. He will be the Supervisor of entry and will ensure the hazard assessment procedures are followed keeping in mind:

- Atmospheric issues (oxygen, flammable and toxic gases and/or vapors),
- Contents (current, previous and residue of cleaning materials),
- Potential energy,
- Environment in the space,
- Configuration of the space,
- Nature of the work,
- External hazards, and
- Miscellaneous hazards (e.g. animals and insects, noise, radiation).

Lock Out

As work continues to change, a review of lock out procedures by R4 is required.

Lockout may be required if there is a chance of Hazardous energy injuring an employee while performing his duties in the confined space. These can be:

- Electrical
- Mechanical
- Hydraulic
- Pneumatic
- Chemical
- Thermal.

Or other source of energy that could injure an employee

Basically, lockout is comprised of three steps:



1. First, an energy isolation device like an electrical disconnect switch or valve is placed in the “off” or “safe” position.
2. Next, a worker’s personal lock, with his or her name and contact information on it, is attached to the device to prevent it from being reactivated by anyone other than the person who attached the lock.
3. Finally, when the work is completed, the person who applied it, removes the lock. No other person may remove a worker’s lock other than a supervisor under emergency
4. Conditions. A report of emergency lock removal must be filed with management.
5. Locks provide a more foolproof means of protection than “tags” since extraordinary force is required to remove them. Tags, unfortunately, can sometimes be by-passed or ignored. It is for this reason that lockouts are the only acceptable method of controlling energy sources for confined space work.
6. Any lines carrying fluids or other substances and any electrical lines that enter the confined space must be disconnected and/or closed off with a blank flange. These circular metal plates can be fitted over the bore of a pipe and must be capable of withstanding the full head of pressure created by any materials upstream in the pipe. Simply closing a valve does not provide adequate isolation for two reasons. First, unless the valve is locked out, it could be opened. Second, even if the valve was locked out, it could leak.
7. If the qualified person or Hydro Safety watch deems that lock up is required then no one will enter the confined space until this situation is re-evaluated, further information may be required.

Ventilation

Natural Ventilation is ventilation of a confined space by natural air movement



resulting from wind or convection currents.

Natural Ventilation cannot be used if:

- There is a high-hazard atmosphere
- If natural ventilation could draw air other than clean respirable air into the confined space

There must be at a minimum of 85 cubic meters of respirable air per hour in a low hazard confined space (50 cubic meters per minute) for each employee in the confined space.

For the best results a combination of natural ventilation and mechanical ventilation is preferred. As long as the air has been tested and the readings are at acceptable limits, it is ok to enter the space although it may be a good idea to ventilate first to remove stale or odorous air. Place ventilator where it will be receiving fresh air. Keep in mind exhaust from passing cars as well as exhaust from generators that may be used for work in the confined space.

Position the end of the air supply hose as close as possible to the work area and support it as necessary to direct flow of air from behind the worker along the wall of the confined space to direct contaminants to the roof without passing into the faces of the workers. Ventilation must be operating when workers are in confined space.

Ventilating is the process of continuously moving fresh air through the space. Ventilating helps maintain an adequate level of oxygen in the space, it dilutes or removes toxic air contaminants that may be found or generated in the space and it also improves comfort levels by controlling temperature, humidity and nuisance odors.

There are two types of general ventilation systems. Exhaust ventilation draws contaminated air out of an area. Supply ventilation blows fresh air in. Supply ventilation is best used to provide fresh air for the occupants and to control low concentrations of materials that are not highly toxic. Generally, drawing air



out of the space (i.e. exhaust ventilation) is better when the atmosphere could be flammable or toxic.

Some additional tips for ventilating a space safely:

With either general or local ventilation, always ventilate with fresh air never with pure oxygen.

- a. All electrical equipment must be grounded, if the location is wet, a Ground Fault Circuit Interrupter (GFCI) is required.
- b. Ventilation equipment must also be electrically bonded to the confined space.
- c. Ensure that the intake for the air supply is a “fresh air” location and is located far away from any flammable or toxic materials.
- d. Locate the exhaust outlet so that contaminants won’t be drawn back into the confined space
- e. Place the outlet where air currents will disperse the exhaust quickly, without endangering any other workers (whether or not they are our employees).
- f. If the exhaust could be flammable, remove all ignition sources from the exhaust area if practicable or replace the exhaust outlet in a more suitable location.
- g. Ensure that the space is being ventilated effectively. The ventilation must provide constant circulation of fresh air through
- h. All areas of the confined space. Two problems to be aware of and to avoid are:
 - i. The recirculation of contaminated exhaust air back into the space, and
 - j. Short-circuiting of the airflow (i.e. when the fresh air moves directly from the inlet to the exhaust outlet, without reaching the other areas of the space).

Additional Pre-Entry Precautions



1. Ensure that all equipment is in good repair and functioning properly prior to entering the confined space.
2. The entry supervisor will hold a toolbox meeting.
3. The Air Testing form will be posted at the work site. One copy of the Form will be kept on the job site. The other copy will be sent to head office at the end of the shift for their record keeping.
4. Pre-entry atmospheric testing must be conducted (within 20 minutes of planned entry).

Standby Person

1. A Standby person will remain directly outside the confined space opening at all times whenever another member of the crew is inside the confined space. There will be a Safety Tripod set up. If there is only two employees in the work party the employee entering the manhole will be connected to the lifeline on the rescue tripod.
*** STANDBY PERSON MUST NOT ENTER THE CONFINED SPACE ***
2. A lifeline is not required to be fastened to the harness if there is more than one person in the confined space or the hazard assessment identifies obstructions or conditions that make its use impractical or unsafe.
3. The **standby** person must be in contact with the crew inside the confined space either by visual, verbal or radio communication
4. There must be a continuous means of summoning the **standby** person
5. The **standby** person must check on the well being of the workers inside the confined space at least every 20 minutes
6. If conditions require a **standby** person will be the one with the appropriate first aid certificate, shall act as an attendant and remain outside at all times



7. **Standby** person will have means to immediately call rescue personnel (Ambulance, fire, truck etc.)
8. At least one employee entering the confined space must wear or regularly observe the air every 10 minutes. This will be documented on the R4 air quality form
9. After leaving a confined space for any reason or 20 minutes has gone by (example bathroom breaks lunch phone call etc). it is necessary to

retest before going back into the space. If anything has changed and is unfit for work, then the space must be ventilated and retested until the atmosphere is acceptable these results must be recorded on the R4 air quality form
10. All entrances to the confined space are required to be open to allow for natural ventilation

Confined Space Entry

The work party must consist of a minimum of two authorized employees both equipped with adequate communication capabilities. If conditions require, one, with an appropriate first aid certificate, shall act as an attendant and remain directly outside the confined space opening at all times whenever another member of the work party is inside the confined space.

1. The employee acting as the attendant shall not enter the confined space.
2. At least one employee entering the confined space must wear or regularly (20-30 minutes) observe air-monitoring equipment. Only one employee performing the same task at the same time in the same work is required to monitor the atmosphere.
3. All requirements resulting from the pre-entry briefing and outlined on the permit issued are to be followed. Appropriate protective equipment



Steel toed boots, hard hats, gloves, safety glasses, ear protection, must be worn.

4. Document and post the Air detector Form at the point of entry.



Emergency Preparedness

Introduction

Emergency response procedures have been developed for your personal safety and protection. If you are unfamiliar with the procedures, review them or speak with a R4 supervisor for more information.

In Case of a Confined Space Emergency:

1. All work will stop in the confined space
2. Standby person will call by radio or phone, the rescue personnel, as well as (if deemed necessary) 911 and the R4 head office. The rescue personnel must have training in first aid as well as CPR and be familiar with the specific rescue procedures written to tend to the situation.
3. If the Air in the manhole is not at acceptable levels then continued ventilation must occur. As well as continued testing of the air.
4. The standby person must make this known the rescue personnel and the rescue personnel will have to re-evaluate how they are going to proceed into the confined space if acceptable levels can not be achieved.
5. If the air monitor is not alarming and there is no other hazardous situation that has risen and all equipment has been shut off then the rescue personnel can enter the confined space and connect the victim to the lifeline for removal from the space.
6. The rescue person shall assess the condition of the victim and decide whether serious injury has occurred. If none has occurred the victim may be hoisted to the surface and exited through the manhole.
7. If the injuries are more severe then the victim must be packaged for removal
8. No Rescue attempt will be made with an Excavator a rescue tripod all



ready on site will be used for this emergency and all other emergencies having to do with manholes/concrete vaults

Confined Space and the Standby Person

Emergency Response

Every project will have first aid facilities and personnel as specified by the WorkSafeBC Occupational First Aid Regulation. First aid attendant(s) are individually and collectively the front line of first aid for any medical emergency occurring to employees, contract personnel and visitors. First aid for a medical emergency will normally occur at the location of the injured person. If the injured person is mobile, first aid will be performed in the first aid facility. Immediately report all work - related injuries and diseases to the supervisor and first aid. In the event of a serious accident (fatality or accident resulting in a critical condition with a risk of death), nothing must be removed from or changed at the accident location before a WorkSafeBC representative has given clearance to do so, except where necessary to facilitate rescue operations or to prevent imminent injury.

Confined Space Work

Employees who will be working in the confined space must participate in a pre-entry (safety meeting) conducted by the supervisor. Hazards, potential hazards and proper procedures must be discussed before entering a confined space. A rescue drill must be done annually and the record must be kept in the R4 office for 3 years.

After a Hazard Assessment and pre entry briefing has been done. A qualified person must test the air within twenty minutes of entry and when he says its acceptable then and only then will the go ahead be giving to enter the confined space this order will be given by the Supervisor of entry, The employees



working in the manhole will wear a safety harness and there will always be at least two authorized employees working at one time and both equipped with adequate communications. One will be assigned as a standby person.

Before entering any manhole it is always important to check for water. If water is in the manhole then this will need to be pumped out before anyone enters the manhole (its is possible for a prone man to drown in 15 cm of water if he is face down.)

Bump Testing

Calibrate or bump test the atmospheric tester at the beginning of the shift or immediately before use, per the manufacturer's instructions. Keep records of calibration and testing.

Following is the manufactures instructions on how to use the atmospheric tester:

The M40's calibration procedure is a "Quick-Cal" procedure that will calibrate all four sensors simultaneously with a single blended cylinder of gas. The 'Quick-Cal' feature offers calibration times of <60 seconds. The M40 can be calibrated with or without the external pump. If calibrating with the SP40 pump on the instrument, pleas attach a piece of tubing from the end of the pump to the demand flow regulator on the blended gas cylinder. When using a pressure regulator to calibrate with the SP40 pump, attach the supplied T-fitting/tubing assembly to the pressure regulator and SP40 pump. If calibrating without the SP40, securely place the M40 cal-cup over the sensors. With a piece of tubing, connect the cal-cup to the regulator on the blended gas cylinder.

Pressing the  key once from the Gas Reading mode is entered, the "Zero" icon and the "Enter", icon will be displayed along with all four gas readings. Pressing the key

will start the zeroing process. When the CO, H2S, and LEL sensors have



finished the zeroing process, the oxygen sensor will start to span. During this process, the “Clock” icon and oxygen full span value will be displayed. When this process is complete, the instrument will display the “Span” icon and “Enter” icon. Pressing the key at this time will cause the M40 to begin

calibration for the remaining sensors. If this occurs, the display will flash the “Clock” icon along with the span values of the sensors. When gas is detected, the display will show the span readings as well as the “Calibration” icon. This is a quick calibration

(‘Quick-Cal’) process, and should take no longer than 60 seconds. At the end of the calibration, the display will flash between the span readings and a pass/fail indication for ten seconds. Full span values between 50 and 70 percent are considered marginal calibrations, and the sensor may soon need replaced. Full span values less than 50 percent will result in a failed calibration. To abort calibration at any point in the process, press the key.

The M40 calibration gases are fixed values. You must calibrate the instrument on a blended cylinder containing 25 ppm H₂S, 100 ppm CO, 25% or 50% LEL Methane or Pentane, and 19% Oxygen at 0.5 LPM flow.

Note: CSA International compulsory calibration is 50% LEL Methane.

Note: If a security code is set, user will not be able to calibrate instrument in the field. Please refer to Security Code Setting for more information.

Data Logging

The M40 comes standard with a continuous loop data logger. The data logger has enough memory to store 50 hours of data for all four sensors as well as the temperature. When the 50 hours is exceeded, the data logger will go back and start overwriting the oldest data in memory. Data is logged in one minute intervals and can be down-loaded to a PC via the software package and Datalink Module.



Data is extracted from the M40 via a Datalink Module (1810-5528).

To purchase a Datalink Module please contact either your local distributor of Industrial Scientific Products, or call Industrial Scientific Corporation at 1-800-DETECTS. To use the Datalink Module, you must first install the setup software located on the CD (comes with Datalink). Also make sure there is a

fresh battery in the Datalink Module. Once the Datalink is connected to the M40, and to the COM

Port on our PC, click on the “Connect” button to establish communication. Once communication is established, data can be downloaded or cleared from the interface menu. To view data, select “File Open”, and to view graphics, select “Graphics” from the spreadsheet menu. To disconnect at anytime, click on the “Disconnect” button and unplug the M40.

Note: When a sensor is in an over range condition, a value of 1000 will be logged into the datalog memory for that sensor.

LEL Over Range

When a LEL over range condition occurs, the M40 instrument will enter into an LEL over range condition. This condition is identified as a continuous high alarm. To clear the LEL over range, power down the M40 and restart it. After any over range it is good practice to verify the calibration of the combustible gas sensor.

Maintenance

With normal routine maintenance the M40 can be relied upon to provide years of dependable service. The following guidelines should be followed when performing maintenance on the M40.

Cleaning



When necessary, wipe the outside of the M40 with a soft, clean cloth. Never use solvents or cleaning solutions of any type. Make sure the sensor diffusion membrane is free of debris. Clean sensor opening with a soft, clean cloth or soft brush.

Charging the Batteries

The lithium-ion (Li-ion) battery pack should be fully charged before using the

M40. To charge the internal battery, plug the flying lead of the M40 battery charger into the charging port located at the bottom of the instrument. This port is protected with a rubber flap. To ensure proper connection, line up the arrow on the charger plug with the arrow on the label located on the bottom of the M40. The battery pack should be fully charged in 5 hours. With a fully charged battery pack, the M40 typically will run 18 hours in the diffusion mode, or 12 hours with the SP40. As the battery life decreases, the shaded area of the battery icon will also decrease. When a maximum of 10 minutes left in the life of the battery, the M40 will emit a periodic tone alerting you to charge the unit.

SP40 Sampling Pump

The SP40 external sampling pump is available for the M40. The SP40 is a parasitic pump that draws its power from the M40's battery pack. The pump attaches to the M40 via two captive screws on the face of the M40. The SP40 has a flow rate of .5 SCFH (0.25 LPM), and can draw up to a 50 foot sample. If flow is restricted to the pump, the M40 will go into a low flow alarm to alert the user.

If the M40 gets a low flow alarm, make sure there are no visible restrictions in the sampling line. If the unit stays in alarm, the internal dust/water filter should be replaced. To replace the filter, power down the M40 and remove the end nozzle of the SP40. Once the nozzle is removed, replace the internal filter. With



the new filter in place, screw the end nozzle back onto the SP40 and power up the M40.

Note: Proper verification of the SP40 flow alarm is recommended before each days use. To verify operation, restrict flow to the SP40 by blocking the inlet with a finger and making sure the M40 goes into a flow alarm. A flow alarm is indicated by a high alarm with a flashing fan icon on the screen



Excavating Safety Procedures and Management Plan

POLICY: It is R4's policy to evaluate all digging, trenching and excavation activities in order to eliminate or minimize the potential of contacting underground utilities, or subsurface materials. No digging, trenching, or excavation activities will be performed unless all the requirements of WorkSafeBC and the BC Safety Authority Regulations as well as R4 OHS Safety Procedures have been met.

Before any excavating begins or drilling with power tools and equipment, the location of all underground utility services in the area must be accurately determined, and any danger to workers from the services must be controlled. A call must be made to **BC ONE CALL** 604-257-1940 (Vancouver area) or 1(800) 474-6886 three business days prior to excavating to request the location of underground facilities at the excavation site. R4 supervisors will make sure to keep line location information at the worksite during all excavating activity.

R4 will notify the gas company (FortisBC) two days in advance of any underground structures being built within one meter of a gas installation.

R4 Excavating Procedures:

1. Using the gas line information, locate and mark lines with paint or stakes and maintain them until digging is underway. Gas lines may be located with an electrical pipe locator.
2. Hand dig across the boundary limits of the locate area in cuts no more than 0.3 meters deep.
3. Hand dig first to expose gas lines before using mechanical equipment. No pointed tools may be used to expose gas lines (an excavator may be used only to break the surface, asphalt, concrete, etc)
4. Confirm by hand digging, the location of underground gas lines within 1 meter of the excavation



5. Hand-dig the gas line in enough places to expose the exact locations and depth.
6. Once the pipe has been hand exposed, mechanical equipment may be used within the mechanical dig zone. Power equipment may then be used to a distance of not closer than 50cm (1.6 feet)
7. If hand digging is not possible then a hydro-vacuum may be considered within the boundary.
8. If the pipe or coating appears damaged then Fortis gas must notified immediately.

STOP WORK IF:

- A pipe has been struck, jarred or pulled
- You detect a rupture, check for the smell or sound of escaping gas in the area.
- The tracer wire or pipe wrapping is damaged.
- You are working on another utility emergency and discover natural gas pipes where you are digging.

EMERGENCY PROCEDURES

If gas is escaping from a ruptured line:

- Shut off machinery and all sources of ignition
- Evacuate-move people upwind if possible
- Keep cars and bystanders away from area
- Call FortisBC gas immediately at 1-800-663-9911
- Don't attempt repairs or operate underground gas valves
- If there's a fire or danger of fire call 911 or the fire department
- If the break or leak is underground, warn people in nearby buildings where gas may enter through drains, etc.



- If gas is entering into buildings, evacuate them as well as neighboring buildings.
- Do not backfill. Gas company (FortisBC) must physically check the integrity of the piping system and repair any damage



Concrete Breaking & Cutting Procedures

Cutting and breaking concrete can create an airborne release of Silica dust, which is known to be hazardous to our respiratory system. Exposure to concrete dust can irritate eyes, nose, throat and the upper respiratory system. Skin contact may result in moderate irritation to thickening/cracking of skin to severe skin damage from chemical burns. Silica exposure can lead to lung injuries including silicosis and lung cancer.

The types of cutting and breaking of concrete, we perform:

- Breaking of concrete with a hydraulic backhoe breaker.
- Breaking of concrete with a pneumatic chipping gun or jackhammer.
- Cutting of concrete with a road saw or cut-off saw.

Procedure

Ensure all Person Protective Equipment is being worn:

- CSA Approved Safety Glasses,
- Face Mask/Visor
- Hard Hat
- Ear Plugs/Ear Muffs
- Safety Boots
- Appropriate Safety Boots
- CSA Approved Duct Mask/Half Face Filter Mask or Full Face Filter Mask

The area should be taped or boarded off and dust control area signs displayed, to warn others of the danger.

Electric fans can be set up to divert dust away from the work area. The area where the dust is being cleared into needs to be taped off and dust control signs to warn others of the potential contamination.

Before commencing cutting or breaking of concrete, apply small amounts of water to the concrete to reduce the dust becoming airborne and therefore



reducing the level of hazard to the worker. Continue to apply water as more concrete is broken.

Personal Protective Equipment

The following list of equipment is the minimum to be worn at all times:

- Safety Eyewear
- Hard Hat
- Earplugs or Earmuffs
- Steel Toed Boots
- High Visibility Traffic Vest
- Full length pants.
- Long sleeved shirt.
- Durable leather gloves.

The following list of equipment is to be kept in all work trucks for instances where they are required:

- North N95 Particulate Respirators (dust mask), for working in dusty environments.
- North 5500 Series Low Maintenance Half-Mask Respirator and P100 filters, for working in dusty environments or while breaking/chipping concrete.
- Promask Scott-O-Vista Fill Facepiece Respirator (NIOSH 42 CFR), with Survivair 100100 NIOSH Organic Vapour cartridges or combination Gas, Vapour & P100 Particulate cartridge for very dusty environments or when breaking and removing asbestos containing ducts.
- Tyvek coverall with hood or breaking and removing asbestos containing ducts (asbestos encapsulant and Safe-T-Strip Glove Bag system is to be kept in all work trucks)



R4

INJURY MANAGEMENT



Injury Management/RTW Policy

R4 is committed to providing a safe workplace for all its employees, preventing work related illness and injury is our primary goal.

R4's early return to work program provides opportunities for an employee who is injured on the job to return to work at full duty. If the injured worker is not physically capable of returning to his/her full duty, this program provides opportunities to perform their regular job with modifications or, when available to perform alternate temporary work that meets the injured workers physical capabilities.

R4 and its employees are committed to cooperating and participating in this RTW program

Signed: _____

Date: _____



R4 Confidentiality

1. All information found within, or used in this program will be kept confidential in accordance with the Worker's Compensation Act, Part 1 Section 156(1)(a)(b).
2. All persons involved in the administration of this program will exercise and agree to maintain confidentiality of rehabilitation records.
3. Injury management information concerning an injured worker will be held with the highest confidentiality. Employees receiving access to such information are to be made aware that this information should not be discussed, shown, or read by anyone who is not directly involved in the worker's return-to-work process.

Injury Management Program/RTW Objectives;

- To reduce the number of days lost of an employee due to injury or illness
- To lessen the financial and emotional impact of the injury on the employee
- Provide a structured process for employees returning to work
- Maintain compliance with current and future legislative obligations
- To reduce insurance and safety costs

ROLES & RESPONSIBILITY

Employer

- Provide a safe work environment
- Develop written return to work policies and procedures
- Educate all employees about the company's RTW program
- Train employees and clients on proper reporting of incidents and incident investigations
- Promptly report all work-related injuries to WorkSafeBC

R4 Employee

- Be familiar with and follow Injury Management/RTW Program procedures
- Immediately report all accidents and illnesses to the supervisor and obtain first aid as soon as possible
- Sign Form 7 and obtain a Functional Abilities/Light Duties form from first aid, to be taken to doctor to complete



- Inform your doctor that light duties are available at work to accommodate your physical abilities
- Return the Functional Abilities/Light Duties form to RTW Coordinator as soon as possible or before start of next shift, or communicate the information to the RTW Coordinator
- Communicate with Supervisor throughout the recovery period, and cooperate with the employer to identify suitable work consistent with limitations identified in the functional abilities form
- Report any concerns faced with the return-to-work process with the R4 Supervisor, or the WorkSafeBC claims adjudicator, so the problem can be addressed promptly

First Aid Attendant

- Assess and treat injured workers within scope of training as a first aid attendant
- Provide initial care, treatment, and follow-up assessment to workers with minor injuries such as cuts, lacerations, and soft tissue injuries
- Assess and stabilize an injured worker who will be referred to medical aid
- Provide Functional Abilities/Light Duties form to injured worker who will be attending medical aid

Supervisor

- Maintain a positive relationship with all employees
- Identify and deal with interpersonal or job related issues that appear to be affecting worker
- Assist in identifying transitional/modified work for employee return to work
- Be aware of employee's physical restrictions and ensure light duties are within these restrictions
- Allow the RTW Coordinator and first aid attendant to observe, treat and record injuries, and monitor an injured or recovering worker
- Inform and educate employees on the intent and purpose of the RTW program

Human Resources

- Complete and submit a Form 7 within 3 days of learning of worker's injury to WorkSafeBC



R4 Return-to-Work Coordinator

- Complete all necessary forms required by WorkSafeBC
- Be responsible for coordinating all efforts aimed at assisting the injured worker to recover and return to work as quickly and as safely as possible
- For a Loss Time Injury (LTI) the return to work coordinator will contact the injured worker within 24hrs of injury being reported to the employer, to ensure:
 - i. Communicate with the injured worker regularly throughout the recovery
 - ii. That the injured worker understands the procedure of the RTW program
 - iii. To prepare the injured worker for a safe and timely return to work consistent with medical advice.
- Establish and store a confidential RTW file compiled on each injured worker.
- Make every effort to ensure to keep all injury management information confidential.
- Consult the worker, WorkSafeBC, and the worker's treating doctor to discuss the need to involve a Workplace Rehabilitation Provider (when required).

WorkSafeBC (Claims Manager)

- Develop an Injury Management Plan soon after being notified of employer's injured worker (3-5 days).
- Maintain regular contact with the RTW Coordinator and the injured worker regarding the progress of the worker's compensation claim.

Involving a Workplace Rehabilitation Provider (When Required)

- We will consider referral to an accredited Workplace Rehabilitation Provider when it becomes evident that an injured worker is not likely to resume their pre-injury duties or cannot do so without changes to the workplace or the work practices.
- The role of the Workplace Rehabilitation Provider is to assist develop and monitor the Return to Work Plan.

R4 acknowledges that the injured worker has the right to choose his/her treating doctor and workplace rehabilitation provider. Should a worker wish to change doctor or provider, he/she must notify the WorkSafeBC Claims Manager as well as the RTW Coordinator.



R4 Injury Management /RTW Program Procedures

1. An employee who is injured at work or in the course of carrying out duties for the employer must immediately report the incident to the Supervisor.
2. The Supervisor is required to:
 - Ensure injured worker receives immediate medical attention
 - Follow company requirements for reporting work-related injuries and illnesses
 - Complete an accident/incident investigation report and submit a copy to the safety department.
 - Maintain contact with the injured worker through the recovery period
3. The R4 RTW Coordinator and the injured worker (in communication with the worker's doctor and the WorkSafeBC Claims Manager) will work together to plan the early and safe return to work.
4. The injured worker is responsible for following medical restrictions while on the job.
5. Following an injured worker's return to work, the Supervisor or the RTW Coordinator, or both will monitor the injured worker's progress, to help resolve any difficulties and to ensure that the prescribed restrictions are carefully followed.
6. The injured worker must immediately report any difficulties performing the job or task assigned, at which point the Supervisor and injured worker will work together to address the problem.

Injury Management /Stay-at-Work Procedures

1. If an injured worker is able to stay at work following an injury and return to his/her regular duties;
The R4 Supervisor will monitor the worker during his shift and contact the first aid attendant if the worker's condition worsens.
2. If the worker needs to be assigned to modified duties, the supervisor will identify temporary limitations based on the first aid attendant's assessment.
3. Once worker returns to his/her job he/she will be regularly monitored to ensure they are progressing towards regular duties.



4. If no improvement is noted and worker is unable to resume full regular duties, the worker may be required to be referred to medical aid.

Retention of Records

R4 will maintain at the workplace all records of injury management documentation, whether active or closed, for a minimum of 5 years or for the duration of the employee's employment.



**R4
Forms**

