PREVIEW

HEALTH & SAFETY MANUAL

PREVIEW

This health and safety manual does not take precedence over applicable Provincial Occupational Health & Safety Legislation. Always refer to legislation to ensure your standards meet or exceed requirements.

Table of Contents

PREVIEW

PREVIEW

PREVIEW

5 RISK ASSESSMENT & MITIGATION

Our Company will ensure that all hazards and risks are assessed prior to starting any work which may include completed safe work practices. As a risk assessment process and method, Our Company will use the following;

- Project Risk Assessments
- Job Hazard Assessments
- Field Level Risk Assessments

The management and supervision team of Our Company will ensure that hazard assessment processes are followed prior to the start of any work.

5.1 Risk Matrix

To identify the potential risk severity, frequency and likelihood, Our Company has implemented the following risk matrix;

RISK POTENTIAL MATRIX					
Probability	**Consequences (Severity)**				
	A Insignificant	**B Minor**	**C Moderate**	**D Major**	**E Severe**
(1) Almost Certain	A1	B1	C1	D1	E1
(2) Likely	A2	B2	C2	D2	E2
(3) Possible	A3	B3	C3	D3	E3
(4) Unlikely	A4	B4	C4	D4	E4
(5) Rare	A5	B5	C5	D5	E5

FAILURE PROBABILITY			
ALMOST CERTAIN	At least one component failure per year.	>1/yr.	**1**
LIKELY	At least one component failure in the next decade.	>1/10 yrs.	**2**
POSSIBLE	Component failures are possible within life span of facility. At least one failure in 10 to 100 yrs.	1/100 to 1/10 yrs.	**3**
UNLIKELY	Component failures are unlikely within life span of facility.	1/1,000 to 1/10 yrs.	**4**
RARE	One failure in 10, 000 components per 1,000 years. Component failures are very rare.	1/10,000 to 1/1,000 yrs.	**5**

PREVIEW

FAILURE SEVERITY	
E	Fatality or permanent disability. Damage or financial loss > $10 million. One month facility outage. Permanent Ecological damage. Major incident attracting industry wide attention.
D	Disabling injury. Damage or financial loss < $10 million. One week facility outage. Sustained environmental release with outside impact. Incident attracting provincial attention.
C	Medical aid injury. Damage or financial loss < $1 million. Significant production upset. Controlled environmental release approaching license limits. Incident attracting local or community attention.
B	Minor illness. Damage or financial loss >$1K and < $100K. Minor production inconvenience. Local spill of minor consequences.
A	Damage or financial loss <$1K.

5.2 Job Hazard Analysis

JHA (Job Hazard Analysis) are to be conducted pre-job. They are a tool to examine the overall scope of work on a larger scale to assess the potential risk and required controls. Hazard assessments are to be conducted by the supervisor and workers for that particular project/job. They may also enlist the assistance of HSE Personnel for the completion of the assessment. The completion of these assessments will be done following the procedure listed below;

A. Work is assigned by management to a supervisor. Supervisor assesses the work and determines the team required to complete the task.
B. Supervision and workers (with aid of HSE Personnel) meet and discuss the work activities and sub-activities for the work.
C. As a group the hazards, consequences and controls for the activities and sub-tasks (activities) to be listed on JHA Form.
D. With the assistance of HSE Personnel, the hazard matrix is utilized to determine the hazard rating pre and post control implementation.

NOTE: The residual risk of the task must not be within the **RED** designations on the matrix. If these tasks cannot be lowered to **YELLOW** or **GREEN** status within matrix, high level management must assess the task and determine additional means of protection for completion.

E. Once all personnel involved are in agreement on the controls and hazard ratings listed on the JHA, sign-offs will be completed.
F. When designate approval has been granted, work may proceed.

Job Hazard Analysis will be filed and in some cases utilized for the development of procedures for work that does not yet have a written procedure.

PREVIEW

5.3 Hazard Identification

Our Company requires that all employees, supervisors and HSE personnel participate in the hazard identification process. Although we utilize several formal, required methods of identification and mitigation, there's still other means that hazards present themselves. There are two elements of hazard identification reporting required by this method; hazardous behaviours and conditions.

Hazardous or At-Risk Behaviours: There are several elements that contribute to workers presenting at-risk behaviours on the job including, over-confidence, lack of training, improper training, improper motivation, attitude, arrogance or lack of knowledge. Our Company encourages workers to identify these behaviours and correct them before they lead to an incident. Workers are not approachable in every situation so the workers may also complete the hazard identification form and report it to a direct supervisor.

Hazardous Conditions: These may exist for several reasons, poor housekeeping, rushing to complete a task, weather conditions, third-part influences or other external forces not controllable by workers. It is important to immediately correct hazardous conditions to prevent an incident or injury. It's best to correct the condition and then report (for corrective and tracking purposes) than to allow the condition to exist and just submit a 'card'. Workers are encouraged to contact their supervisor immediately if the situation cannot be remedied by the worker alone.

Positive Reinforcement: Although there are many hazardous conditions and behaviours presented at the jobsite, there are also positive behaviours and work practices that must not go unnoticed. Workers and supervisors alike are encouraged to submit hazard identification cards for positive behaviours and actions taken by our workforce. Our Company encourages positive reinforcement and would like to ensure that every worker is recognized for a job done well and safely.

5.4 Field Level Risk Assessment

FLRAs (Field Level Risk Assessments) are completed per job, they are utilized in conjunction with Job Hazard Analysis as well as work practices and procedures. FLRAs are intended to identify workplace hazards that exist at the moment the work is being completed. They are a tool to identify changing conditions at the workplace, there may be changes throughout the task, or when workers have left the area and returned to the same task.

The Field Level Risk Assessment is completed by an individual worker or a group of workers on one particular job. If other workers are assigned another task, they must complete their own FLRA. When entering a work area, workers are responsible for identifying new workers and having that worker sign onto the FLRA for his/her area and reviewing the hazards and controls for that task.

PREVIEW

5.4.1 Field Level Risk Assessment Process

1. Workers acquire FLRA prior to being assigned any tasks for that day
2. Once workers have been assigned work and are in the work area, the FLRA process begins
3. One worker is designated to document the FLRA process on the form
4. Workers discuss the task breakdown, potential hazards and controls to be put into place
5. Workers discuss the hazard ID checklist, identify potential hazards and hazard elimination to ensure all the basis have been covered
6. New workers, environmental risks and job details will also be included
7. All workers involved in the FLRA will sign onto the FLRA
8. The supervisor will complete the review portion of the FLRA prior to starting work
9. The supervisor will periodically review the FLRA throughout the shift for changes and to ensure that all applicable risks and controls are documented
10. Once the job is complete, the supervisor will collect the FLRAs review and sign off

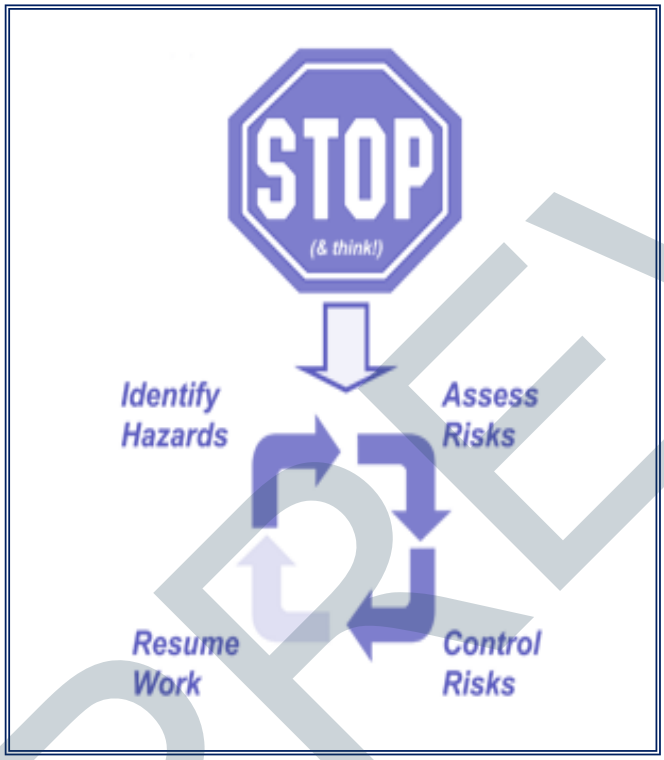
PREVIEW

5.4.2 FLRA CHART

THE FLRA PROCESS:

WHEN TO DO AN FLRA:

- ✓ Before starting a task
- ✓ When the job scope changes
- ✓ If a new task is introduced
- ✓ When conditions change
- ✓ If a new worker is added to the job



PRIOR TO STARTING:

- ✓ Review the identified hazards of your task
- ✓ Review the practice/procedure for work to be executed
- ✓ Receive the proper training for the job
- ✓ Receive the appropriate qualifications for your trade or task
- ✓ Receive the proper instruction for your task
- ✓ Review the scope of work to be completed
- ✓ Review the Emergency Response Plan
- ✓ Receive the necessary Permits

REMEMBER TO TAKE THE TIME TO THINK THROUGH YOUR TASK BEFORE STARTING!

IF WE FAIL TO PLAN, WE PLAN TO FAIL!

PREVIEW

5.5 Hazard Control

There are several methods to controlling hazards that are assessed through the risk assessment processes. The most common methods utilizes are as follows;

1. **Eliminate** the hazard or the task completely
2. **Combine** tasks or several steps in a task
3. **Rearrange** the work area or flow of the work to reduce the risk
4. **Simplify** the job by providing better tools, instructions or information
5. **Reduce** the risk by finding a better way to do the task or reduce the frequency
6. **Substitute** different materials or chemicals that do not present such a high risk
7. **Relocate** where the task is completed to make it safer and more efficient
8. Utilize speciality **Personal Protective Equipment** to reduce the risk
9. **Engineer** out the risk completely utilizing methods listed above or other methods
10. Use **Administrative** controls to reduce the risk encountered

5.6 Documentation

FORM	COMPLETION REQUIREMENTS
FORM-HSE-M005-001-Job Hazard Assessment	Pre-job completion and review/sign-off
FORM-HSE-M005-002-Field Level Risk Assessment	Pre-task, as task changes or when new task is assigned
FORM-HSE-M005-003-Hazard Identification Card	Per occurrence

PREVIEW

8 PERSONAL PROTECTIVE EQUIPMENT

8.1 Policy

PPE (Personal Protective Equipment) is a basic method of worker protection from hazards encountered on the jobsite. All PPE issued is to be inspected and maintained according to manufacturer's specifications. PPE is the last line of defence in the protection from hazards but utilized as a minimum barrier of protection from risks encountered on the jobsite. It is our policy to ensure that all workers are equipped with basic PPE, have the required training for its use, care and maintenance and have access to specialty PPE where required. Identified hazards at the job site should be eliminated or controlled before utilizing personal protective equipment as a method of protection.

8.2 Requirements

Basic PPE required on all jobsites where work is being executed for the purpose of our business is;

- ✓ CSA Approved Steel Toed Boots
- ✓ CSA Approved Class 'E' Hard Hat (White for supervision only)
- ✓ CSA Approved Safety Glasses
- ✓ Reflective Vest

Our Company is responsible for the provision of all basic and specialized personal protective equipment for employees and visitors. Sub-contractors will be required to provide their own PPE. All PPE will be returned to Our Company upon ending employment or when visit with company is complete.

8.3 Selection, Use and Training

The PPE required for a task will depend on the hazards associated with the work, surrounding work activities and the location where the work is being executed.

PPE must always be used for the intended application as per manufacturer's specifications and inspected at regular intervals to identify potential damage that may affect the integrity of the equipment.

Training is required for the use of all basic and specialized PPE. Some specialized PPE, for example, respiratory protection and fall protection, required formal third party training.

PREVIEW

HEAD PROTECTION			
PPE Type	*Protection Provided*	*Application*	*Training Required*
Class E Hard Hat 	✓ Falling material and/or debris ✓ Electrical protection up to 20,000V ✓ Protruding objects ✓ Sun and elements	✓ Required as minimum PPE on all jobsites	**DAILY INSPECTION** ✓ Not more than 5 years old ✓ No cracks or damage in shell ✓ No faded or chalky areas on shell ✓ Suspension system in good condition
FOOT PROTECTION			
PPE Type	*Protection Provided*	*Application*	*Training Required*
CSA Approved Steel Toed Boots *(minimum 6 inches in height)* 	✓ Falling or dropped material ✓ Protection from the elements ✓ Sharp objects ✓ Striking or crushing toes	✓ Required as minimum PPE on all jobsites	**DAILY INSPECTION** ✓ No visual damage to steel toed portion of boot ✓ No cracks or holes in boot ✓ Laces not frayed ✓ Sole/grip intact (at least ½ dime of tread)
EYE & FACE PROTECTION			
PPE Type	*Protection Provided*	*Application*	*Training Required*
CSA Approved Safety Glasses 	✓ Protection from UV rays ✓ Prevention from foreign objects ✓ Protection from splashing liquids ✓ Protruding objects protection	✓ Required as minimum PPE	**DAILY INSPECTION** ✓ Lenses free from scratches or other defects impeding vision ✓ Straps, arms and nose pieces free of cracks, missing

PREVIEW

CSA Approved Safety Goggles 	✓ Same as safety glasses as well as improved protection from dust, particles and foreign material	✓ Required for areas where dust and debris are a hazard in work area	pieces or other damage

EYE & FACE PROTECTION			
PPE Type	*Protection Provided*	*Application*	*Training Required*
CSA Approved Face Shield 	✓ **NOT TO BE USED WITHOUT EYE PROTECTION** ✓ Facial protection from flying debris ✓ Protection from splashing liquids	✓ Required for the use of saws, handling of liquids or other tasks that create dust, debris or have potential for splashing liquid	✓ Face shields have correct connection for hard hats

FLAME RESISTANT CLOTHING			
PPE Type	*Protection Provided*	*Application*	*Training Required*
Flame Resistant Coveralls 	✓ Protection from sparks ✓ Protection in case of fire and/or explosion	✓ Required for areas where oil, gas and fire and explosion hazards exist ✓ Where workers are exposed to flames ✓ Where site specific rules require	**DAILY INSPECTION** ✓ Free from rips, tears, and holes ✓ Free from burns and fraying ✓ All buttons, Velcro and other methods of securement function

PREVIEW

HEARING PROTECTION			
PPE Type	*Protection Provided*	*Application*	*Training Required*
Ear Muffs & Ear Plugs 	✓ Protection from sounds in excess of 85dB ✓ Ear plugs can be issued as disposable or acquired as custom fit ✓ Ear muffs go over the outside of the ear	✓ Required when noise exceeds 85dB ✓ Additional information provided in safe work practice; HSE-PRA-021-Hearing Conservation found in section 17	**DAILY INSPECTION** ✓ Disposal hearing protection not to be reused ✓ Inspect for torn muffs ✓ Ensure hard hat connector functions ✓ Wash custom fit ear plugs after each use

HAND PROTECTION			
PPE Type	*Protection Provided*	*Application*	*Training Required*
Leather Gloves 	✓ Basic hand protection for general use ✓ Protection from elements	✓ Required for general work with hands	**DAILY INSPECTION** ✓ Ensure there are no tears or worn patches ✓ Inspect for holes, burn marks or other defects ✓ Ensure a good fit on the hand ✓ Make sure there is no loose debris inside the glove
Cotton Gloves 	✓ Means of additional warmth under other protective gloves	✓ ONLY to be utilized under other task specific gloves	

PREVIEW

Kevlar Gloves 	✓ Protection from sharp, protruding or pointed objects and/or material	✓ To be used for cutting tasks or tasks where handling sharp objects or metal is required	
Rubber Gloves 	✓ Protection from water, liquids and/or chemicals	✓ Required when handling liquids, chemicals or working in wet conditions	

***Note**: There are other types of gloves that may be required, ie. gloves for handling bio hazardous material, these types do not cover all available*

PREVIEW

FALL ARREST			
PPE Type	*Protection Provided*	*Application*	*Training Required*
Fall Arrest Harness  Lanyard  Retractable 	✓ Method of arresting fall when used in conjunction with other fall arrest equipment ✓ Absorbs force of fall to limit force sustained on person in fall arrest harness ✓ Prevents a fall from occurring by stopping when force is applied (similar to seatbelt function)	✓ All fall protection equipment and accessories are used in conjunction with other fall arrest equipment ✓ Used in several potential fall situations – more information in Section 17 – HSE-PRA-013-Fall Protection	✓ **FORMAL TRAINING REQUIRED** ✓ All equipment must be inspected pre-use ✓ Equipment must be re-certified every 5 years and/or after equipment is exposed to a fall ✓ Check for frays, fall indicators, missing labels/tags, broken carabineers, damaged metal, paint or other markings, chemical oil or grease on material or any other defects that could affect equipment designed function

RESPIRATORY PROTECTION			
PPE Type	*Protection Provided*	*Application*	*Training Required*
Dust Mask 	✓ Dust masks are utilized for protection from larger respiratory hazards ie. Sawdust	✓ This method of protection is inadequate as there is no ‘seal’ or method of ensuing a proper seal is obtained	✓ **ALL WORKERS MUST HAVE MASK FIT TRAINING** ✓ Pre-use inspections are required on all respiratory

PREVIEW

			equipment
Half Mask Respirator 	✓ Half mask respirators provide protection from various substances identified by cartridge used with respirator	✓ Half mask and full face respirators are used in different applications, more information on their use can be found in Section 17 – HSE-PRA-045-Respiratory Protection	✓ Cleaning wipes are provided for half and full mask respirators ✓ Filters and cartridges must be changed at regular intervals to prevent contamination ✓
RESPIRATORY PROTECTION			
PPE Type	*Protection Provided*	*Application*	*Training Required*
Full Face Respirator 	✓ Full mask respirators are utilized to protect the entire face and respiratory system from air born hazards	✓ Half mask and full face respirators are used in several different applications, more information on their use can be found in Section 17 – HSE-PRA-045-Respiratory Protection	✓ All respiratory equipment is to be utilized as per manufacturer's requirements

8.4 PPE Inspection Requirements

All personal protection equipment must be inspected when issued to work, although equipment may be new, there could still be factory defects affecting it's function. Inspection guidelines listed will be followed daily and pre-use for all basic and speciality PPE. Additionally, fall protection equipment will be formally inspected pre-use to document defects and ensure equipment is in proper working order pre-use.

Our Company is responsible for the re-certification of any required speciality PPE as well as inspections required by third party. Inventory items, certifications and inspections will be logged on the PPE inventory tracking form.

PREVIEW

8.5 Documentation

FORM	COMPLETION REQUIREMENTS
FORM-M008-001-PPE Assignment	As PPE is issued to workers
Form-HSE-M008-002-Specialty Personal Protective Equipment Inventory	As required

PREVIEW

17 SAFE WORK PRACTICES & PROCEDURES

17.1 Safe Work Practices

SAFE WORK PRACTICES	DOCUMENTATION
Administrating Safety and Employment Orientation	HSE-PRA-001-Administrating Safety and Employment Orientation
Behaviour Observation Program	HSE-PRA-002-Behaviour Observation Program.docx
Chemical Hazards, Biological Hazards & Harmful Substances	HSE-PRA-003-Chemical Hazards, Biological Hazards and Harmful Substances.....docx
Commercial Vehicle Operation	HSE-PRA-004-Commercial Vehicle Operation.docx
Competency Program	HSE-PRA-005-Competency Program.docx
Compressed Air	HSE-PRA-006-Compressed Air.docx
Compressed Gas Cylinders	HSE-PRA-007-Compressed Gas Cylinders.docx
Confined Space	HSE-PRA-008-Confined Space.docx
Cranes, Hoisting & Lifting Devices	HSE-PRA-009-Cranes, Hoisting & Lifting Devices.docx
Cutting Tools	HSE-PRA-010-Cutting Tools.docx
Defective Tools	HSE-PRA-011-Defective Tools.docx
Driving Safety	HSE-PRA-012-Driving Safety.docx
Drug & Alcohol Policy	HSE-PRA-013-Drug & Alcohol Policy.docx
Electrical Safety	HSE-PRA-014-Electrical Safety.docx
Ergonomics	HSE-PRA-015-Ergonomics.docx

PREVIEW

Fall Protection	HSE-PRA-016-Fall Protection.docx
Fatigue Management	HSE-PRA-017-Fatigue Management.docx
Fire & Explosion Hazards	HSE-PRA-018-Fire & Explosion Hazards.docx
Fire Extinguishers	HSE-PRA-019-Fire Extinguishers.docx
First Aid	HSE-PRA-020-First Aid.docx
Fit For Duty	HSE-PRA-021-Fit For Duty.docx
General Safety Precautions	HSE-PRA-022-General Safety Precautions.docx
Ground Disturbance	HSE-PRA-023-Ground Disturbance.docx
Hand Tools	HSE-PRA-024-Hand Tools.docx
Hearing Conservation	HSE-PRA-025-Hearing Conservation.docx
Hot Work, Welding & Explosive Atmospheres	HSE-PRA-026-Hot Work, Welding & Explosive Atmospheres.docx
Housekeeping	HSE-PRA-027-Housekeeping.docx
Hydrogen Sulphide	HSE-PRA-028-Hydrogen Sulphide.docx
Journey Management	HSE-PRA-029-Journey Management.docx
Lifting & Manually Handling Loads	HSE-PRA-030-Lifting & Manually Handling Loads.docx
Lock Out Tag Out	HSE-PRA-031-Lock Out Tag Out.docx
Management of Change	HSE-PRA-032-Management of Change.docx
Manlift & Scissor Lift Operation	HSE-PRA-033-Manlift & Scissor Lift Operation.docx
Newly Assigned Workers	HSE-PRA-034-Newly Assigned Workers.docx
Office Safety	HSE-PRA-035-Office Safety.docx

PREVIEW

Overhead Powerlines	HSE-PRA-036-Overhead Powerlines.docx
Portable Ladders	HSE-PRA-037-Portable Ladders.docx
Power Tools	HSE-PRA-038-Power Tools.docx
Powered Mobile Equipment	HSE-PRA-039-Powered Mobile Equipment.docx
Radiation Exposure	HSE-PRA-040-Radiation Exposure.docx
Refuelling Vehicles	HSE-PRA-041-Refuelling Vehicles.docx
Respiratory Protection	HSE-PRA-042-Respiratory Protection.docx
Rigging	HSE-PRA-043-Rigging.docx
Safeguards	HSE-PRA-044-Safeguards.docx
Scaffolds & Temporary Work Platforms	HSE-PRA-045-Scaffolds & Temporary Work Platforms.docx
Stress in the Workplace	HSE-PRA-046-Stress In The Workplace.docx
Stretch & Flex Program	HSE-PRA-047-Stretch & Flex Program.docx
Sub-Contractor Management	HSE-PRA-048-Subcontactor Management.docx
Ventilation Systems	HSE-PRA-049-Ventilation Systems.docx
WHMIS (Workplace Hazardous Materials Information System)	HSE-PRA-050-WHMIS (Workplace Hazardous Materials Information System).docx
Winterization Program	HSE-PRA-051-Winterization Program.docx
Working Alone	HSE-PRA-052-Working Alone.docx
Working in Extreme Temperatures	HSE-PRA-053-Working In Extreme Temperatures.docx

PREVIEW

LOSS CONTROL REPORT

INCIDENT DATE:		**INCIDENT TIME:**	
PROJECT:		**INCIDENT LOCATION:**	
SUPERVISOR:		**TRACKING ID:**	
CLIENT NAME:		**FIELD/OFFICE:**	FIELD OR OFFICE
SHIFT START:		**SHIFT END:**	
DAY/NIGHT SHIFT:	DAYSHIFT or NIGHTSHIFT	**CLIENT CONTACT:**	
WORKER NAME:		**LENGTH OF EMPLOYMENT:**	
REPORT COMPLETED BY:			

INCIDENT CLASSIFICATION

I refuse to complete the task assigned by my supervisor. I believe that in completing this task, it will endanger the health and safety of myself or someone else, for the following reason(s): Please check all that apply

NEAR MISS	☐	FIRST AID	☐
PROPERTY DAMAGE	☐	MEDICAL AID	☐
RESTRICTED WORK	☐	LOST TIME INCIDENT	☐
ENVIRONMENTAL	☐	FATALITY	☐

LOSS EVALUATION

ACTUAL LOSS:		**POTENTIAL LOSS:**	

RISK POTENTIAL MATRIX

PROBABILITY	CONSEQUENCES (Severity)				
	A Insignificant	B Minor	C Moderate	D Major	E Severe
(1) Almost Certain	A1	B1	C1	D1	E1
(2) Likely	A2	B2	C2	D2	E2
(3) Possible	A3	B3	C3	D3	E3
(4) Unlikely	A4	B4	C4	D4	E4
(5) Rare	A5	B5	C5	D5	E5

REPORTED TO SUPERVISOR:	YES ☐ NO ☐	**DATE REPORTED:**	
SUPERVISOR:		**TIME REPORTED:**	

PREVIEW

NON-OCCUPATIONAL INJURY			
STOP COMPLETING THIS REPORT AND UTILIZE THE WORKER REPORT OF INJURY OR ILLNESS			
Occupational injuries are to be documented on this form and WCB Employer and Worker's reports completed for all injuries. Only the injuries that are treated by medical facilities will be reported to WCB by HSE Personnel or Management within 48 Hours.			
INJURY OR ILLNESS			
PART OF BODY:			
NATURE OF INJURY:			
PATIENTS NAME:		**OCCUPATION:**	
TREATMENT PROVIDED:			
MEDICAL FACILITY:		**PHYSICIAN:**	
ADDRESS:		**CONTACT #:**	
MODIFIED DUTIES:	YES ☐ NO ☐	**LENGTH:**	

PROPERTY AND/OR EQUIPMENT DAMAGE			
EQUIPMENT #:		**VEHICLE TYPE:**	
MAKE:		**MODEL:**	
OPERATOR:		**LICENSE CLASS:**	
OTHER DRIVER:		**OTHER VEHICLE:**	

DIAGRAM OF THE DAMAGE OR ACCIDENT SCENE

Provide a sketch of the area and how the damage occurred:

PREVIEW

ENVIRONMENTAL			
MATERIAL RELEASED:		**AMOUNT RELEASED:**	
REPORTABLE:	YES ☐ NO ☐	**PERCENT CLEAN-UP:**	
CONTACT NAME:		**NUMBER:**	

DESCRIPTION OF EVENTS

PREVIEW

CAUSE ANALYSIS (Use CHART)

TYPE OF CONTACT

IMMEDIATE CAUSES

BASIC/UNDERLYING CAUSES

REPORT ATTACHEMENTS

ITEM REQUIRED	*YES*	*N/A*	*ITEM REQUIRED*	*YES*	*N/A*
Field Level Risk Assessment	☐	☐	*Job Hazard Assessment*	☐	☐
Equipment/Vehicle Inspection	☐	☐	*Training Records*	☐	☐
Witness Statements	☐	☐	*Pictures*	☐	☐

ACTION ITEMS

ACTION REQUIRED	*DATE*	*ASSIGNED TO*	*COMPLETE*
			☐
			☐
			☐
			☐
			☐
			☐

All action items must be tracked using tracking id for incident report and listed on the action register. Follow-up must be completed to close out report.

PREVIEW

REPORT SIGN-OFF			
HSE REPRESENTATIVE			
NAME	ROLE	SIGNATURE	DATE
INVESTIGATORS			
NAME	ROLE	SIGNATURE	DATE
NAME	ROLE	SIGNATURE	DATE
NAME	ROLE	SIGNATURE	DATE
NAME	ROLE	SIGNATURE	DATE
SUPERVISOR			
NAME	ROLE	SIGNATURE	DATE
NAME	ROLE	SIGNATURE	DATE
MANAGEMENT REVIEW			
NAME	ROLE	SIGNATURE	DATE

PREVIEW

DOCUMENT NUMBER HSE-PRA-015-Ergonomics

REVISION	DATE	DESCRIPTION	ORIGINATOR	REVIEWED BY
0	01-03-2014			

PREVIEW

Table of Contents

PREVIEW

1.0 PURPOSE

The purpose of this work practice is to provide guidelines for executing work to limit musculoskeletal and ergonomic related injuries. Our Company is committed to provide a work environment that limits the risk of injury and provides the education workers need to work safely.

2.0 APPLICATION

This safe work practice applies to all workers employed with Our Company, including sub-contractors and temporary employees or anyone else that may be exposure to such substances as a result of our work execution. It is acceptable for sub-contractors to follow their own safe work practice where their program meets or exceeds our standard.

3.0 DEFINITIONS

TERM/ACRONYM	DEFINITION
Carpal Tunnel Syndrome	A compression of the median nerve in the wrist that may be caused by swelling and irritation of tendons and tendon sheaths
Cumulative Trauma Disorder	Cumulative Trauma Disorder (CTD) is an injury of the musculoskeletal and nervous system that may be caused by repetitive tasks, forceful exertions, vibrations, mechanical compression (pressing against hard surfaces), or sustained or awkward positions. Cumulative Trauma Disorders are also called Repetitive Motion Disorders (RMDs), Repetitive Stress Injury (RSI), Musculoskeletal Disorders (MSDs), repetitive motion injuries, overuse syndromes, or repetitive strain injuries
Ergonomics	The science of fitting the workplace to the worker, not the worker to the workplace. Ergonomics is concerned with the design of working systems in which human beings interact with machines and workplace tasks.
FLRA	Field Level Risk Assessment
HSE	Health, Safety & Environment
JHA	Job Hazard Assessment
Low Back Disorders	These include pulled or strained muscles, ligaments, tendons, or ruptured disks. Cumulative effects of faulty body mechanics, poor posture, and/or improper lifting techniques may cause low back disorders.
OH&S	Occupational Health & Safety
PPE	Personal Protective Equipment

PREVIEW

4.0 RESPONSIBILITIES

The following are responsibilities for the implementation, management, compliance and execution of this program.

4.1 Management

Management representatives are responsible for;

- The ownership and review and approval for use of this work practice
- Overall implementation, communication and training required with this work practice
- Identifying ergonomic hazards that workers may be exposed to at a work site
- Supporting the supervision team in ensuring compliance with this work practice

4.2 Supervision

Supervisors are responsible for ensuring;

- Workers are familiar with guidelines listed in this work practice
- All work direction is communicated and understood by all personnel involved in the task
- Hazards are identified and controlled prior to the start and/or continuation of work utilizing the JHA and/or FLRA tools
- Ongoing work is reassessed periodically for new hazards that may present throughout work execution
- Variations from this work practice are approved by management and documented utilizing the Management of Change program
- Compliance with this work practice by all personnel executing work for the purpose of our business including, subcontractors or temporary employees
- Assess work areas for potential ergonomic risks and complete workplace assessment
- Provide training and education to workers on workplace factors that may contribute to musculoskeletal injuries

4.3 Workers

Workers are responsible for;

- Being familiar with this work practice and comply with safe guidelines listed within
- Having the proper training to execute work safely and efficiently
- Being fit for work and remain so throughout the duration of the shift
- Clarifying any work direction that is misunderstood prior to executing work
- Stopping any unsafe act or condition and immediately reporting to supervision
- Identifying hazards at the worksite and controlling them prior to executing work
- Utilizing the FLRA tool to document worksite hazards and controls implemented
- Reporting any potential discomfort relating to ergonomic fatigue
- Always know the limits of capabilities and never overexert

PREVIEW

5.0 PERSONAL PROTECTIVE EQUIPMENT

BASIC PPE REQUIRED:	CSA Approved Hard Hat, Safety Glasses, Steel Toed Boots and Reflective Vest.

SPECIALTY PPE REQUIRED *(Check the box for required PPE)*:

						
SPECIALTY GLOVES	RESPIRATORY PROTECTION	GOGGLES	FACE PROTECTION	SPECIALTY FOOTWEAR	HEARING PROTECTION	PROTECTIVE CLOTHING
☐	☐	☐	☐	☐	☐	☐

OTHER PPE REQUIRED:	

Refer to MSDS for all WHMIS controlled products utilized and ensure appropriate PPE is worn.

PPE utilized must be inspected daily prior to use and maintained according to manufacturer's specifications. All workers must be trained in the use and maintenance of basic personal protective equipment. Where speciality PPE is required, workers must have approved third party training and ensure the PPE is maintained, inspected and used as required. The work practice for the specific PPE must be referenced and reviewed for understanding by the user prior to donning the speciality PPE.

6.0 ERGONOMIC HAZARD RECOGNITION

Tasks and/or workstations with multiple risk factors have a higher potential to cause ergonomic injuries. Some typical risk factors for such hazards include:

- Repetitive/prolonged activities,
- Forceful exertions, usually with the hands,
- Pinch grips,
- Prolonged static posture of the body, trunk, and/or extremities,
- Awkward postures,
- Excessive bending or twisting,
- Continued elevation of the elbow,
- Continued physical contact with work surfaces (e.g., contact with edge of table),
- Restrictive workstations and inadequate clearances, and/or
- Improper seating/support

Tasks with these risk factors should be evaluated for methods and techniques to eliminate either the task or to minimize the risk

PREVIEW

7.0 SYMPTOMS OF REPETITIVE STRAIN INJURIES

- Pain, swelling or stiffness in the joints such as wrists, shoulders and knees
- Pain, tingling or numbness in the hands or feet
- Back or neck pain
- Stabbing pains in the arms or legs
- Weakness or clumsiness in the hands.

This is where ergonomics comes in. Jobs and equipment must be designed to prevent stresses such as lifting heavy objects, twisting, bending or stretching motions. Excessive repetitive work, pounding with the hands, kneeling for long periods of time and a host of other stressful postures and activities should be prevented.

8.0 ERGONOMIC HAZARD PREVENTION MEASURES

Eliminating the risk factors will reduce the risk of injury. To effectively reduce ergonomic risk factors and eliminate ergonomic injury the following preventative measures should be addressed.

- Ergonomic awareness training shall be provided
- Work tasks should be planned, and workstations should be designed, to prevent ergonomic hazards.
- When employees have concerns about potential problems, they should promptly notify either their supervisor or HSE Representative. Implementation of corrective actions resulting from workstation and/or task evaluations shall be followed through to completion.
- Medical management of an ergonomic injury will be conducted to track the employee's progress and recovery and to ensure that corrective actions are effective in reducing the ergonomic injury.

9.0 WORKPLACE ASSESSMENT

- Is your table or work bench at a comfortable height? How about your chair or stool?
- Are your tools and supplies positioned so you can reach them without excessive bending, stretching or lifting?
- How about the tools that you use? Are the handles the right shape to conform comfortably to your hands without any excessive bending of your wrists? Should they be padded to reduce impact or vibration?
- If you stand up to work, is there a footrest so you can change position to rest your back and legs? Would you perform your tasks more easily at a multi-purpose work station, where you can both stand or sit?
- Can the lighting be improved? Should the noise be reduced?
- Do you incorporate some breaks and stretching exercises into your work day to avoid strain injuries and fatigue?

PREVIEW

10.0 BEST PRACTICES TO REDUCE CUMULATIVE TRAUMA DISORDERS

The primary objective of ergonomic safety is on prevention rather than reaction. These practices are designed to give each employee methods to reduce physical discomfort and prevent ergonomic injury. Change body position frequently, whether sitting or standing, change body and appendage position every few minutes or several times each hour.

- Get up from your chair if you have been sitting or sit if you have been standing.
- Stretch arms, legs, and fingers.
- Rotate wrists.
- Refocus eyes and move head every few minutes or several times an hour if you are working at a computer station, reading, or writing.
- Take your eyes off the computer screen or paper documents and refocus on something else at a greater distance.
- Move your head from side to side, look up toward the ceiling, and down toward the floor.
- Break up repetitive or prolonged tasks. Get up and make copies, check mailbox, make a telephone call, etc.
- Intersperse sedentary tasks with tasks that require different movements.
- Rearrange work area for comfort and keep frequently used items within easy reach.
- Recognize physical discomforts and adjust your position or workstation.
- Make sure chair is adjusted so you can sit with your feet flat on the floor and with your thighs parallel to the floor. Your trunk should be straight but inclined slightly forward at the hip.
- While typing, try to avoid bending your wrists. A flat or wrist “neutral” position should be maintained and elbows should be bent at 90 to 120 degrees.
- Don't strike the keys too hard. Try to develop a light touch. Adjust the keyboard to that end if possible.
- A 15-minute rest break is recommended after one hour of continuous video display terminal (VDT) work when there is high visual demand. A 15-minute rest break is recommended after two hours of continuous VDT work when there is moderate visual demand.
- Maintain sufficient lighting to avoid eyestrain. When working at a VDT, adjust the screen such that there is no glare.
- Use a copyholder to maintain the same distance and elevation as the computer screen to minimize bending your neck. The operator’s face should generally be 16 to 24 inches from the screen.
- If discomfort ever develops, ask your supervisor or the HSE Manager for a formal ergonomic evaluation.

PREVIEW

11.0 STRETCHING PROGRAM

To reduce the stresses imposed on the body, warm-up exercises are recommended prior to the beginning of the work day, after breaks, and after lunch.

11.1 BENEFITS

- Increases flexibility/elasticity of muscles
- Increases circulation to warm the muscles, improving mental alertness, reducing fatigue
- Decreases muscle tension and stress

11.2 WHEN TO STRETCH

- Prior to starting your day
- During short breaks (at least once per hour)
- After breaks or lunch
- If tension or stress is apparent
- After a lengthy task duration or an extended awkward posture

11.3 PROPER STRETCHING TECHNIQUES

- Relax and breathe normally. Do not hold your breath.
- Hold each stretch for a count of 15 or as long as comfort is maintained.
- Use gentle, controlled motions. Do not bounce.
- Keep the knees slightly bent for better balance.
- Stretch until a mild tension is felt, then relax.
- Stretch by how you feel and not by how far you can go.

12.0 METHODS OF ELIMINATING ERGONOMIC

- Selecting for a tool that needs less force to use it
- Selecting a tool that is balanced and does not tip forward or back when you hold it
- Selecting the right tool based on a handle that:
  - ✓ Is comfortable in the hand — not too thick or too small or too short.
  - ✓ Does not conduct electricity or heat. (Work with a cold handle can make some repetitive stress injuries worse.)
  - ✓ Is comfortable in the hand when held tightly and made of “non-slip” material.
  - ✓ Does not have sharp edges or finger grooves or ridges.
  - ✓ Has a surface made of soft materials, like rubber or plastic.
  - ✓ Is long enough for the whole hand, not just your fingers, if a lot of force is needed. A long handle can be used as a lever to add to the force of a tool.
  - ✓ Is thicker, if gloves will be used.
- For some tools, the handle should have a spring return; this re-opens the tool after use. The spring returns saves wear and tear on hand and finger muscles.

PREVIEW

- A bent angle or adjustable angle on some tools can help keep the wrist straight. Different tools on different jobs can keep the wrist straight, for instance, on walls, a pistol grip is better.
- Power tools should have a long trigger, so that more than one finger at a time can be used.
- Select a tool with low vibration and noise levels. Too much vibration can damage the blood vessels in your hand and cause “white finger.”
- Select a tool that is heavy enough to do the job, but not so heavy that it adds strain. Suspend a very heavy tool with a rope or counterbalance.
- If more than one person will use a tool, try to find one that is comfortable for everyone to hold. Different tools may be needed for left-handed and right-handed workers and for workers with big or small hands.

13.0 TRAINING REQUIREMENTS

- All workers must be trained in this safe work practice

14.0 APPENDING DOCUMENTATION

Form-HSE-PRA-015-F001-Workplace Assessment

PREVIEW

WORKPLACE ASSESSMENT

DATE:		WORK AREA:	
COMPLETED BY:		SUPERVISOR:	

1. PHYSICAL DEMANDS	NO RISK	AT RISK
If any of the items are deemed to put worker at risk of injury for personal or job contributing factors, controls must be implemented prior to starting work. If the risk factors are personal, another work may be assigned to complete the task.		
a. Neck	☐	☐
b. Hands/Wrist	☐	☐
c. Shoulder	☐	☐
d. Back	☐	☐
e. Knee/Ankle/Feet	☐	☐
2. FORCE REQUIRED AND WORKING DISTANCE	**NO RISK**	**AT RISK**
a. Push, pulling, lifting and lowering	☐	☐
b. Overloaded objects	☐	☐
c. Extended distances of travel with loads	☐	☐
3. WORK POSTURES	**NO RISK**	**AT RISK**
a. Back curved or stooped position	☐	☐
b. Back twisting during movement	☐	☐
c. Neck bent or twisted	☐	☐
d. Arms too far from body or too close	☐	☐
e. Wrists flexed, extended or in pinched positions	☐	☐
4. REPETITIVE USE	**NO RISK**	**AT RISK**
a. Same tasks repeated frequently using same muscles	☐	☐
5. STATIC MUSCLE USE AND DURATION	**NO RISK**	**AT RISK**
a. Overhead work for more than 30 s	☐	☐
b. Standing for extended periods of time with knees locked	☐	☐
c. Standing in one position for extended periods without moving or stretching	☐	☐
6. CONTACT STRESS	**NO RISK**	**AT RISK**
a. Extended periods of localized pressure on part of body	☐	☐
7. WORK LAYOUT AND CONDITIONS	**NO RISK**	**AT RISK**
a. Working heights, reaches, equipment, tool design, storage conditions that contribute to risk	☐	☐
b. Seating conditions, weight distribution, objects handled contribute to risk factors	☐	☐
8. ORGANIZATION OF WORK	**NO RISK**	**AT RISK**
a. Conditions of work contribute to fatigue, stress, frustration or other risk factors	☐	☐
9. ENVIRONMENTAL CONDITIONS	**NO RISK**	**AT RISK**
a. Exposure to poor lighting, vibration, cold or hot air/wind/water	☐	☐

All at risk conditions must be corrected and/or controlled before continuing work

PREVIEW