



Health and Safety Program Manual

For Medical Services

Version 1

Table of Contents

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1. Introduction.....	7
Training and Certification Programs.....	11
Dry Camp Policy.....	11
1. Corporate Health & Safety Policy.....	12
Purpose.....	12
Medical Examination and Health Monitoring.....	13
Communication of Safety Policies and Procedures.....	13
General Safety Rules.....	13
Safety Committee.....	15
Responsibilities.....	17
Hazard Assessment.....	19
Hazard Identification.....	20
Hazard Control.....	21
Regular Inspections & Monitoring.....	25
2. First Aid Services & Equipment.....	27
First Aid.....	27
Communication.....	27
Rescue Team.....	27
3. General Safety Training Policy.....	28
Purpose.....	28
Responsibilities.....	28
Training Program Outline.....	29
General Safety Training.....	29
New Employee Safety Orientation.....	30
4. Hazard Communication & Chemical/Pharmaceutical Safety.....	31
Purpose.....	31
Responsibilities.....	31
General Program Information.....	32
Employee Training.....	33
General Chemical Safety.....	34
5. Medical Personnel Safety and Specific Risks.....	41
Purpose.....	41
Infirmary hazards:.....	42
Field interventions hazards:.....	43
Preparation prior to work in remote locations.....	46
6. Electrical Safety.....	47
Purpose.....	47
Responsibilities.....	47
Hazard Control.....	47



Training.....	48
Electrical Lockout & Tagout Requirements	49
7. Fall Prevention.....	52
Purpose.....	52
Responsibilities.....	52
Hazard Control.....	52
General Requirements	53
8. Flammable Liquids	57
Purpose.....	57
Hazard Control.....	57
9. Health Centre Safety.....	61
Purpose.....	61
Responsibilities.....	61
Procedures.....	61
10. Housekeeping & Material Storage	64
Purpose.....	64
Management and Employee Responsibility.....	64
Smoking Policy.....	64
Department and Area Housekeeping Procedures.....	64
Material Storage.....	66
11. Kitchen Safety.....	68
General Kitchen Safety Rules	68
Points to Remember for Increased Kitchen Safety	69
Dermatitis Prevention	72
12. Personal Protective Equipment.....	73
Purpose.....	73
General Rules	73
Personal Protective Equipment Selection	74
Eye and Face Protection	75
Selection Guidelines for Head Protection	76
Foot Protection.....	77
Hand Protection	77
Hearing Protection	78
Visibility	78
13. Respiratory Protection.....	80
Purpose.....	80
Responsibilities.....	80
Program Evaluation	80
Record Keeping.....	81



Training and Information.....	81
Basic Respiratory Protection Safety Procedures	82
Selection of Respirators.....	83
Respirator Fit Testing	87
Respirator Operation and Use.....	88
Face piece seal protection.....	89
Continuing Effectiveness of Respirators.....	89
Procedures for IDLH atmospheres	89
Cleaning and Disinfecting.....	90
Respirator Inspection	90
Respirator Storage.....	91
Repair of Respirators.....	92
Breathing Air Quality and Use	92
14. Tool Safety Program	93
Purpose.....	93
Responsibility	93
Hazard Control.....	93
15. Preventive Vehicle Maintenance Program	98
Purpose.....	98
Responsibilities.....	99
Training.....	99
Maintenance Interval Schedule.....	100
16. Helicopter Safety	100
General Safety Practices.....	100
Approaching a Helicopter.....	101
17. Cold Weather Clothing & Precautions	102
18. Operation Policy during “White Outs”	104
19. Travel on Frozen Lakes and Rivers.....	105
20. ATV Safety	107
Specific Safe Driving Tips	107
21. Safe Operations of Skidoos	110
Normal start-up operations.....	110
Fuel mixing procedures	110
Emergency equipment and preparation	110
Operations and safety	111
22. Wildlife Management Plan	112
Hunting, Fishing and Firearm Policy.....	112
Wildlife Interaction.....	112
23. Communication Systems.....	115



24. Fire Safety & Emergency Guidelines.....	116
Fire Precautions.....	116
Duties and Responsibilities.....	118
Training and Drills.....	118
Emergency Procedures.....	119
Reporting and Assistance	120
Maintenance Duty, Check List and Inspection Logs	121
25. Accident Investigation	124
Purpose.....	124
Responsibilities.....	124
Reporting and Appeal Procedure	125
Accidents or Dangerous Occurrences	126
Near Miss Investigation.....	127
Accident Prevention	127
Investigative Procedures	128
Fact-Finding	129
Interviews	129
Problem Solving Techniques	130
26. Follow-up with Injured Worker and Safe Return to Work	133
Follow-up with Injured Worker	133
Safe Return to Work.....	133
27. Emergency Response Procedures.....	134
28. Progressive Disciplinary System	136
30. Tactical Medical Service Ethics policy.....	137
31. Records and Statistics	137
Purpose.....	137
Records.....	137
Review of Statistics.....	138
32. Workplace Violence and Harassment.....	139
Purpose.....	139
Definitions	139
Management Responsibilities	139
Recognizing and Dealing with Potentially Violent Situations or Harassment	140
Appendices	143
Employee Report of Accident, Injury or Illness	144
Weekly Toolbox Safety Meetings	146
Supervisor's Report of Accident	147
Supervisor Safety Inspection	149
New Employee Site Safety Orientation Checklist.....	151



Employee Site Safety Orientation Checklist	155
Hand Signals	156
Polar Bear Awareness.....	157
Preventive Maintenance Checklist - Heavy Equipment	161
Preventive Maintenance Checklist - Light Equipment	163
Vehicle Preventive Maintenance - All Terrain Vehicles.....	166
Vehicle Preventive Maintenance - Power Unit Daily Inspection.....	168
Field Inspection Report on Vehicles	170
Environmental / Spill Report	174
Transitional Work Agreement	176
Job Safety Training Checklist	177
Glossary of Terms	178

1. Introduction

Tactical Medical Service (TMS) provides a complete medical system that includes every aspect of remote medical support from project evaluation through to medical equipment, staffing and training. The purpose of this *Health and Safety (H&S) Program Manual* is to provide a basis for, and to encourage management practices that are directed towards the minimization of risks and potential hazards associated with remote worksites throughout Canada.

While Tactical Medical Service activities are specific to the provision of onsite medical support systems the TMS Health and Safety Program manual contains important H&S policies, procedures and practices that span the spectrum of many the work site related jobs and trades. This provides the TMS Medical Support Staff with the standards and awareness required to contribute to Canadians H&S programs and to better prepare for medical interventions that lie outside the scope of clinical medicine.

Our objective in providing this program is to ensure that an effective H&S management system is available and that this plan is effectively communicated to all site staff. This program will assist in the creation of a working environment where risks and potential hazards are properly identified and mitigated.

The identification of hazards, assessment of risks and implementation of risk control systems are essential processes for establishing H&S management system. Also essential is the commitment of Project Management Team who must strive to:

- Set and verify safety objectives.
- Oversee the implementation of the system.
- Maintain feedback mechanisms needed to continuously improve the system.

The management encourages all employees to participate in the program and provides proper equipment, training, and procedures. Employees are responsible for following all procedures, working safely, and, wherever possible, improving measures. The key elements of the H&S management system are:

- Management Commitment
- Team Planning
- Worker Consultation
- Hazard Management
- Worker Training
- Management Supervision and Verification
- Site Health and Safety Committee

Certain programs and policies have been enhanced to ensure the working environment relative to H&S concerns. These include:

- Policy of a “Dry” camp (enhanced)
- Designation of Responsible Authorities relative to health and safety matters
- The implementation of a comprehensive medical surveillance program and the availability of on-site emergency medical services
- Fire Emergency Plan and Spill Contingency Plan
- Availability of all pertinent health and safety and environmental regulations



- Availability of environmental operational procedures and standards
- First aid and CPR training and H&S training

An injury and incident-free workplace is our goal. Through continuous safety efforts, we can accomplish this.

Glossary of Terms

- Accident:** means an unplanned interruption of an orderly process involving the motion of people, objects or substances
- Confined space:** refers to a tank, silo, storage bin, process vessel or other enclosure not designed or intended for human occupancy and that a person would only enter if there is work to be done.
- He:** when used within this document, refers to both male and female genders and shall be interpreted as is appropriate
- Supervisor:** means a person who instructs, directs, or controls workers in the safe performance of their duties
- TMS:** refers to Tactical Medical Service
- WHMIS:** refers to the Workplace Hazardous Materials Information System

NOTE

While care has been taken in the preparation of this manual, there are places where simplification or changes from the wording exist. In such cases, regulations and engineering data shall over-rule this manual.



This H&S Program Manual presents 32 sections and several appendices. These are:

- | | |
|----------------|---|
| Section | 1) Introduction |
| Section | 2) Corporate Health & Safety Policy |
| Section | 3) First Aid Services & Equipment |
| Section | 4) General Safety Training Policy |
| Section | 5) Hazard Communication & Chemical Safety |
| Section | 6) Surface Haulage Roads |
| Section | 7) Electrical Safety |
| Section | 8) Fall Prevention |
| Section | 9) Flammable Liquids |
| Section | 10) Health Centre Safety |
| Section | 11) Housekeeping & Material Storage |
| Section | 12) Kitchen Safety |
| Section | 13) Personal Protective Equipment |
| Section | 14) Respiratory Protection |
| Section | 15) Tool Safety Program |
| Section | 16) Preventive Vehicle Maintenance Program |
| Section | 17) Helicopter Safety |
| Section | 18) Cold Weather Clothing & Precautions |
| Section | 19) Operation Policy during “White Outs” |
| Section | 20) Travel on Frozen Lakes and Rivers |
| Section | 21) ATV Safety |
| Section | 22) Safe Operations of Skidoos |
| Section | 23) Wildlife Management Plan |
| Section | 24) Communication Systems |
| Section | 25) Fire Safety & Emergency Guidelines |
| Section | 26) Accident Investigation |
| Section | 27) Follow-up with injured worker and his safe return to work |
| Section | 28) Emergency Response Procedures |
| Section | 29) Disciplinary System |
| Section | 30) Records, Statistics and Key Performance Indicator |
| Section | 31) Workplace Violence and Harassment |



This program also contains various appendices that provide supporting documents that should be considered as an integral part of the document. These include:

- Employee Report of Accident, Injury or Illness
- Supervisor's Report of Accident
- Supervisor Weekly Safety Inspection
- Polar Bear Awareness Poster
- Hand Signals
- Camp Rules & New Employee Site Safety Orientation Checklist
- Vehicle Preventive Maintenance
- Field Inspection Report on Vehicles
- Environmental / Spill Report
- Transitional Work Agreement
- Weekly Tool Box Meeting
- Job Safety Training Checklist

The TMS H&S Program is an amendable document that may evolve as the projects are progressing. The Project Management Team may have to face unpredictable situations that will require new operating procedures. The safety committee will review these procedures and will ensure standards are met or exceeded to prevent work-related accidents.

Responsible Authority

Site personnel who are specialized in and who have appropriate training and accreditation regarding specific site operations and health and safety concerns shall be regarded as Responsible Authorities. A Responsible Authority can request a review of any operational procedure and can stop work on such a procedure until an appropriate assessment has been completed. Responsible Authorities will also be consulted regarding any identified health and safety matter. Responsible Authorities might include, but are not limited to:

- Medical Directors
- Nurses
- Head Nurse
- Professional Association Monitors
- Site Engineer(s)
- Health and Safety Officers
- Trainers
- Other personnel that have appropriate training and accreditation.

Identification of who's acting as the Health and Safety Officer, as the site Medic and as other Senior Management Roles will be reviewed prior to each construction season as part of the worker orientation seminar. In addition, a list of all names fulfilling these above-mentioned positions will be posted inside the camp near the site superintendent wall, near the Health and Safety office/room wall and near the Medic room.



Training and Certification Programs

Specific training and certification programs shall be completed by selected members of the project staff prior to, or concurrent with the initiation of site operations. These programs will include, but are not limited to:

- First aid and CPR certification program (senior staff prior to project initiation)
- AED
- WHMIS
- Transport of Dangerous Goods
- Helicopter Safety
- Wilderness Readiness programs

These programs shall be conducted by certified trainers.

Dry Camp Policy

With the utmost priority of ensuring the safety of camp personnel and junior trainees, Tactical Medical Service has determined that the possession, importation, sale, consumption, and / or usage of alcohol and illegal drugs is prohibited at every work site assigned by the employer. The policy established is Zero Tolerance. Any person who violates this policy can be removed from the work site and can be terminated from company service.



1. Corporate Health & Safety Policy

Purpose

It is the objective of Tactical Medical Service to ensure the Safety and Health of our employees by taking all reasonable precautions to protect employees against occupational injuries and industrial diseases.

Our objective in providing this program is to ensure that an effective health and safety management system is available and that this program is effectively communicated to all site staff. This program will assist in the creation of a working environment where risks potential hazards are properly identified and mitigated.

The identification of hazards, assessment of risks and implementation of risk control systems are essential processes for establishing a Health and Safety Management System. Also essential is the commitment of Project Management Team who must strive to:

- Set and verify safety objectives.
- Oversee the implementation of the system.
- Maintain feedback mechanisms needed to continuously improve the system.

The preferred method of hazard abatement shall be through application of engineering controls or substitution of less hazardous processes or materials. Total reliance on personal protective equipment is acceptable only when all other methods are proven to be technically and/or economically non-feasible.

The key elements of the System are:

- Management Commitment
- Team Planning
- Worker Consultation
- Hazard Management and specific jobs safety analysis
- Worker Training
- Management Supervision and Verification

Site Health and Safety Committee

Our Supervisors are responsible and accountable for the promotion and development of employee safety awareness and to ensure the use of safe work practices.

Every person who is employed at TMS has the duty to work safely and promote safe work practices, safe working conditions and positive attitudes towards accident prevention.



Medical Examination and Health Monitoring

TMS staff may have to undertake a comprehensive medical work fitness evaluation prior to employment and/or reporting to the work site. The baseline fitness evaluation shall consist of:

- Work and Health history (questionnaire and interview)
- Physical Examination by Medical Doctor
- PFT evaluation (spirometry)
- Visual acuity
- Non-specific lab work (CBC, Hb, Hct, MCV, MCHC, Albumin, Immunoglobulins, Urea, Creatine, Bilirubin, ALT, AST, Gamma GT, LDH, Triglycerides, Urine dipstick and microanalysis)
- Tetanus booster (if last longer than 10 years)

TMS Medical staff may be required to maintain an Immunization schedule that is appropriate for the specific work environment.

Employees are to comply with reasonable requirements of the medical program, project sites rules, and any applicable laws relating to workplace.

Communication of Safety Policies and Procedures

Communication of safety rules is accomplished by:

- Discussion during New Hire Orientation.
- Publication in the New Hire Orientation.
- Posting throughout the facility, in conspicuous areas.
- Seasonal refresher training.
- On-the-spot corrections and reinforcement by supervisors.

General Safety Rules

In order to promote good accident prevention practices, the following safety rules have been developed. Following these safety rules will greatly reduce the possibility of accidents occurring.

Each employee is responsible for his own actions and must be alert to the actions of others. The cooperation and support of all employees is essential to an effective Safety Program and each must do his part.

Report all work injuries and illnesses immediately.

1. Report any unsafe conditions or equipment to your Supervisor immediately and warn any employee who may become involved.



2. Use vehicle seat belts when applicable.
3. No employee is to ride on the deck of a truck or in the back of a pickup truck unless the vehicle has been designed or modified for this purpose. All employees are to ride in the cabs of vehicles. Wearing seatbelts in all vehicles and equipment where they are provided, is mandatory whenever the vehicle or equipment is in motion.
4. Use, possession or sale of alcohol is not permitted on site. Misuse of prescription and non-prescription drugs is not permitted on site.
5. Smoking is permitted only in the designated "Smoking Areas".
6. Only authorized and trained Employees may repair or adjust machinery and equipment.
7. Do not clean or adjust equipment or machinery while it is running or in motion when there is a danger of contact with moving parts.
8. Never leave a machine running while it is unattended except for stationary equipment (compressors, etc.) or where special conditions prevail and precautions taken.
9. Never leave loose materials or tools where there is a danger of them falling.
10. Gasoline powered motors must be stopped before re-fueling and the NO-SMOKING rule observed.
11. Gasoline, oil, grease and other flammable liquids are to be stored clear of the work area and NO-SMOKING signs are to be prominently displayed in the storage area.
12. Fire extinguishers must be recharged immediately after use and immediate superior must be notified.
13. Only authorized and trained Employees may dispense or use chemicals. It is your responsibility to know where Material Safety Data Sheet (MSDS) are located and that they are available for your use and review.
14. Keep work areas clean and aisles clear. Do not block emergency exits.
15. Running, horseplay, scuffling or fooling is strictly forbidden on the job.
16. Never distract the attention of a fellow employee while he is working.
17. Never point an air hose at another employee. Never clean clothes or skin with compressed air.
18. Rings, wrist watches, bracelets, dangling neckwear, or long loose hair must not be worn in any work situation where there is a hazard of them becoming caught in machinery or other objects.
19. Wear and use the prescribed Personal Protective Safety Equipment. This includes foot protection, head protection, gloves, etc.
20. Only authorized and trained individuals may enter contaminated or restricted site areas.
21. Failure to follow the above rules may cause serious injury and/or illness. Disciplinary Action, up to and including Termination, will be used to assure rule enforcement.



22. Please use common sense and think before you act. If you are not sure how to complete a job or task safely or have any questions, ask your supervisor.

A copy of the General Safety Rules will be provided to and reviewed with each employee who has not previously worked for TMS. This will be done prior to the commencement of work. A copy of the General Safety Rules will also be posted at each job site.

Safety Committee

General

The Health & Safety Committee is an important part of the Tactical Medical Service safety management effort. Managers and supervisors can gain valuable assistance in their areas by a joint effort with their committee members.

Goals of the Safety Committee

1. Involve employees in safety management
2. Lower the rate and severity of accidents and injuries
3. Maintain a safe workplace
4. Involve employee participation in safety programs
5. Increase Health & safety awareness

Safety Committee Formation

The committee should be large enough to represent all departments at the facility but have the most efficient number of members to assist in accomplishment of committee goals.

Membership on the committee is to be voluntary and will meet any existing labour agreements. Volunteer committee membership may rotate every four (4) to six (6) weeks.

Standing members to the committee will include a representative from Management, Logistics, Medical Direction and Onsite Medical Support Staff. The purpose of the standing membership is to provide continuity, lend experience and provide a resource for the Committee. The Committee Chairperson is elected. The Committee Chairperson will conduct the meetings, develop agendas and minutes.

Duties and Responsibilities

The Safety Committee will:

- Meet on a regular basis, at least weekly and perform weekly tool box meeting designed for discussion leaders to use in preparing safety meetings.
- Develop short and long term goals



- Discuss accident prevention methods
- Review previous accidents and injuries
- Recommend changes to safety procedures and policies
- Post the minutes of meetings in general areas around the camp.

Chairperson

The Chairperson will lead the meeting and will report Committee activities to Management.

Safety Committee Members

Safety Committee Members have the following responsibilities:

- Attend each weekly meeting
- Discuss safety activities and unsafe acts/conditions
- Encourage all Employees to work safely

Safety Officer

The position of is not necessarily full time. The duties of the Safety Officer on sites are as following:

Ensure that the Health and Safety Program is implemented

- Prepare accident/incident/near miss report
- Document daily activities related to the safety program
- Conduct safety orientation sessions to all new personnel on site
- Conduct site inspections on a predetermined basis
- Recommend alternatives in operating procedures
- Produce Health and Safety Committee meeting minutes
- Act as an information resource to the Safety Committee

Records

Records of all Safety Committee Meetings and actions taken shall be maintained by the Safety Officer. The Safety Officer reports to the Site Superintendent and ultimately to the Owner's representative, in case of unresolved issues. TMS is responsible for providing information regarding safety concerns to the client's representatives. Should the Safety officer be not satisfied with TMS's response/action through the Site Superintendent, he shall then communicate directly with the owner's representative on site.

All TMS records relating to and supporting Health and Safety and Medical statistics and claims are maintained for a period for ten (10) years.



Training

Each Safety Committee Member will be provided the necessary training in:

- Function of the committee
- Safety Programs
- Safety Policies

Responsibilities

Management, supervisors and employees are responsible for following all safety program requirements and safety practices. If procedures or practices are identified as needing changes, these changes shall be accomplished through normal management review practice.

Manager's Responsibilities

The Manager is responsible for developing and applying sound safety policies and procedures in the company. This basic responsibility includes, but is not limited to, the following:

1. Reviewing all safety reports to ensure that "problem trends" and repeat items are corrected
2. Conducting a safety inspection annually or more often as required
3. Reviewing all Accident Investigations reports to ensure they are serving their intended purpose
4. Reviewing safety statistics in order to assess the effectiveness of the current safety activities
5. Reviewing all safety meeting reports to ensure that meaningful talks are being provided to employees
6. SETTING A GOOD EXAMPLE

Superintendent's Responsibilities

The Superintendent is responsible for ensuring the effective application of safety policies and procedures in the workplace. This basic responsibility includes, but is not limited to, the following:

Conducting safety audits and issuing results to supervisor. Reviewing audits with the manager

1. Ensuring that employee frequently monitor work practices and working conditions
2. Ensuring that employee are taking prompt corrective action to rectify unsafe work practices and conditions
3. Reviewing all Accident Investigation reports to ensure that accident causes are being properly identified and appropriate corrective action is being taken. The Superintendent will participate directly in the investigation of all serious accidents



4. Reviewing all Accident Investigation reports and making recommendations on whether or not a WorksafeBC claim should be contested
5. SETTING A GOOD EXAMPLE

Supervisor's Responsibilities

The Supervisor is responsible for promoting safety awareness and demonstrating to his employees, through day to day attitudes and actions, that job performance is a high priority in the company. This basic responsibility shall include, but not be limited to, the following:

Providing general safety induction and instruction to new employees prior to assignment of duties.

1. Providing safety equipment and protective devices to employees, as required.
2. Enforcing all safety rules and regulations.
3. Developing and maintaining an effective program of good housekeeping
4. Frequently inspecting for unsafe work practices and conditions and taking prompt corrective action when required.
5. Promptly investigating and reporting of all accidents and near miss incidents.
6. Coordinating safety meetings with employees.
7. SETTING A GOOD EXAMPLE.

Employee's Responsibilities

Each employee shall take reasonable care to protect his health and safety as well as the health and safety of other employees who may be affected by his acts or omissions. Tactical Medical Service will have a small, dedicated staff on site at all times. Due to the nature of many of our contracts where there is only one TMS employee on site, the Onsite Medical Support Personnel contribute to regular health and safety surveillance and monitoring.

This basic responsibility includes, but is not limited to, the following:

Knowing and complying with all Safety Rules, Safety Legislation and Regulations.

1. Knowing and complying with Job Safety Procedures.
2. Maintaining "Good Housekeeping" within the work area.
3. Immediately reporting unsafe conditions to Supervisor.
4. Promptly reporting all accidents and injuries, no matter how slight, providing and obtaining required medical attention.
5. Co-operating in accident investigations in order to help prevent recurrence.
6. SETTING A GOOD EXAMPLE.

Hazard Assessment

Purpose

Incidents are caused by the following factors: Environment, procedures, equipment, supervision, and workers.

As an employer TMS carries liability if there is an injury; as do supervisors and workers. Therefore, it is appropriate that the corporation identify a protocol for identification, classification and remediation of hazards in the work place.

The purpose of this protocol is to document a format and procedure for identifying types of hazards: Physical, chemical, biological psychological following and between inspections. Once the hazard has been identified the supervisor or committee then will do the assessment based on a system recommend by provincials health and safety regulations in compliance with labor laws..

Based on the classification, various controls (engineering, administrative, work practise or PPE) will be recommended to the appropriate agency for remediation on a triaged basis. Medical monitoring may be required if the task has specific fitness criteria.

Definitions

Hazard: something that is potentially very dangerous.

Accident: an undesired event or sequence of events causing injury, ill-health or property damage.

Near Miss: an incident where, given a slight shift in time or distance, injury or ill health or damage easily could have occurred—but did not this time.

Incident: an unplanned, undesired event that hinders completion of a task and may cause injury or other damage.

Workplace/Worksite: Where an employer regularly conducts business. This may include working at home if the worker did or could have done this.

Objectives

To provide the following:

- ✓ A process for identifying various hazards or threats that may cause an accident or negatively affect efforts to get to safety;
- ✓ A process to determine the appropriate response to these hazards and to monitor implementation;
- ✓ A protocol that identifies the roles and responsibilities of the people involved and is retained in a prominent place in the workplace and on the networks public folders; and provide written procedures, communicated to all employees, that provides a checklist and the steps to be followed when a potential problem is identified;
- ✓ Satisfy regulatory and legal requirements

Hazard Identification

Immediate Response Required

An employee or guest who notices a safety or health hazard on TMS property or worksite is to report it immediately to the Supervisor. After hours the "on call" personnel will be available to deal with any health, safety or security matter.

If anyone notices a breach of any of the rules or conduct they are to report it to their supervisor immediately. If the situation warrants it (the danger is imminent) they are to speak to their co-worker immediately and then advise their supervisor. The supervisor is then to discuss the matter with the employee breaching the rules and retrain them or undertake the disciplinary process. Contact and emergency numbers have been provided to every employee for posting in a prominent location.

Initial Job Hazard Assessment

Each employee should complete a baseline Hazard Assessment Inventory. This will help them become aware of any potential for incidents and that awareness is a start to prevention. As well it will indoctrinate them into thinking strategically about safety and provide a mechanism to ask questions. Once this is complete it should be reviewed by the supervisor and discussed. The employee should be encouraged to recommend controls that would eliminate or reduce the threat.

The form in Appendix A will assist the employee in identifying hazards. A copy of the appropriate check list may help direct their attention to possible problems in their work environment.

Inspection Reports and Trends

Following the monthly inspections the supervisor should review the checklist for potential hazards and complete the Hazard Assessment Form in Appendix B. This is then taken to the committee for review unless the danger is high and needs immediate attention. As well the committee should be monitoring health trends and assessing complaints looking for a pattern of behaviour or ongoing maintenance problem.

Classification

WorksafeBC in British Columbia recommends the following system to classify workplace hazards. The first step is to rank the severity of an incident that could result from the hazard:

I - Catastrophe - an incident that could cause death, widespread illness, major loss of equipment and /or facilities.

II - Critical - an incident that could cause severe injuries, serious illness, equipment or facilities damage.

III - Marginal - an incident that could cause small injuries, illness or damage.

IV - Negligible - an incident that could result in minor injuries that would require minimal first aid, if any.

The second classification is used to show the chances of an incident happening:

- A- **Probable** - an incident is likely to occur immediately or soon.
- B- **Reasonably probable** - an incident is likely to occur eventually.
- C- **Remote** - an incident could occur at some point
- D- **Extremely remote** - and incident is unlikely to occur at any time.

The higher the ranking the greater the priority in terms of fixing the problem.

Hazard Resolution

In normal circumstances the hazard would be identified and remedial action being undertaken.

Remediation comes in the following forms:

Engineering: refer the problem to TMS's project manager to generate a work order or to the Director to order new equipment or furnishings.

Administrative: refer the matter to senior management to effect changes in operational protocols, like improving record keeping or maintenance schedules.

Deficient work practices: The supervisor is to find a competent authority to prepare the proper work practice or equipment operational guidelines and/or train the employees.

Personal Protective Equipment: The supervisor is to supply or replace personal protective equipment and until such times as it is available that task is not to occur.

At each committee meeting the members will review all outstanding matters for a status report on the hazards and ensure that tasks have been completed in the time frame assigned or that there is a reasonable explanation for the delay.

Hazard Control

Substitution

The risk of injury or illness may be reduced by replacement of an existing process, material, or equipment with a similar item having more limited hazard potential. Care must be exercised in any product or method substitution to ensure that the substitution is technically acceptable, and to avoid the possibility of introducing new or unforeseen hazards.

Isolation

Hazards are controlled by isolation whenever an appropriate barrier or limit or is placed between the hazard and an individual who may be affected by the hazard. This isolation can be in the form of physical barriers, time separation, or distance.



Administrative Control

This method of hazard mitigation depends on effective operating practices that reduce the exposure of individuals to chemical or physical hazards. These practices may take the form of limited access to high hazard areas, preventive maintenance programs to reduce the potential for leakage of hazardous substances, or adjusted work schedules which involve a regimen of work in high hazard and low hazard areas. Adjusted work schedules are appropriate only when the hazard is recognized as having a limit below which nearly all workers may be repeatedly exposed without adverse effect.

Personal Protective Equipment

PPE wear is a preventive method meant to work in conjunction with other methods of control to protect the worker as a last resort if the other system were to fail. The equipment should always be properly adjusted and fitted to the worker in order to be effective and safe.

This method of hazard control is least preferred because personal protective devices may reduce a worker's productivity, while affording less effective protection against the recognized hazard than other methods of control. Nevertheless, there are instances where adequate levels of risk reduction cannot be achieved through other methods, and personal protective devices must be used, either alone or in conjunction with other protective measures.

Hazard Control Principles

Hazardous conditions in the workplace may be prevented through appropriate actions when facilities are designed, when operating procedures are developed, and when equipment is purchased. Once hazards are identified, whether through inspection or complaint, immediate action shall be taken to avoid unreasonable danger.

Design Reviews

Safety and health issues shall be considered, designed, and engineered into all facilities. Projects that involve potential health hazards such as toxic material, radiation, noise, or other health hazard shall be designed in accordance with established principles of good safety and industrial hygiene engineering.

Operating Procedures

Standard operating procedures or similar directives developed by the supervisor that are issued to direct the way work is performed shall include appropriate health and safety requirements. Supervisors must submit standard operating procedures. Recommendations for changes/additions to the procedures for safety and health purposes shall be submitted in writing to department managers.

Purchasing Procedures

Many hazards can be avoided by incorporating appropriate specifications for purchased equipment/material and contracted efforts that involve work at company facilities. Employees



responsible for purchasing or developing specifications for purchases should coordinate with the safety officer for applicable material or equipment purchases to ensure safety and health considerations have been addressed.

Interim Hazard Abatement Measures

During the time needed to design and implement permanent hazard control measures, immediate, temporary measures are needed. Where engineering controls are not immediately applicable, administrative controls and/or personal protective equipment are appropriate for use as interim hazard abatement measures.

Permanent Hazard Abatement

Engineering control methods are the preferred method of hazard control, followed by administrative control and personal protective equipment. Feasible engineering controls shall be used to reduce hazardous exposure, even when only partial reduction of exposure is possible through engineering methods.

Hazard Control Development

The following possible actions will be considered when recommendations are developed for prevention or reduction of hazards:

1. Avoiding, eliminating, or reducing deficiencies by, material selection or substitution;
2. Isolating hazardous substances, components, and operations from other activities, areas, personnel, and incompatible materials;
3. Relocating equipment/medications so that personnel access during operation or manipulations shall not result in exposure to hazards such as chemical burns, cutting edges, sharp points, toxic or contaminated environments;
4. Providing suitable warning and notes of caution concerning required personnel protection in operation of equipment or treatment, care and transport of patient(s);
5. Providing distinctive markings on hazardous components, equipment, or facilities;
6. Requiring use of personal protective equipment when other controls do not reduce the hazard to an acceptable level;
7. Monitoring exposure to insure that engineering controls effectively reduce the hazard; and
8. Training employees to recognize hazards and take appropriate precautionary measures.

Hazard Reporting

Identification and reporting of potentially unsafe or unhealthy working conditions is the responsibility of all employees. All employees must report unsafe or unhealthy working conditions to their immediate supervisor who will promptly investigate the situation and take appropriate corrective actions. Supervisors will contact the Safety Office for assistance as necessary.



Supervisors will keep the reporting employee informed of all actions taken. Any employee may submit a written report of an unsafe or unhealthy working condition directly to the Safety Officer.

Signs and Tags

Signs and tags are not intended as substitutes for preferred abatement methods such as engineering controls, substitution, isolation, or safe work practices. Rather, they are additional safety guidance and increase the employee's awareness of potentially hazardous situations. Tags are temporary means of warning all concerned staff of hazardous conditions, defective equipment, etc. Tags are not to be considered as a complete warning method but should only be used until a positive means can be employed to eliminate all hazards.

Danger Signs shall be used where an immediate hazard exists, and specific precautions are required to protect personnel or property. The sign shall be of red, black, and white colors. Warning Indications or Notice Signs should be placed on damaged equipment, and immediate arrangements should be made for the equipment to be taken out of service and sent to be repaired. Supervisor should be notified every time a defective piece of equipment is detected.

Caution Signs shall be used to warn of a potential hazard or to caution against unsafe practices, and to prescribe the precaution that will be taken to protect personnel and property from mishap probability. The sign shall be of yellow and black colors.

All Exit Signs shall be utilized to clearly identify the means of egress from a building or facility.

Where the exit is not apparent, signs shall have an arrow indicating the direction of the exit.

Biological Hazard Warning Signs shall be used to signify the actual or potential presence of a biological hazard and to identify equipment, containers, rooms, experimental animals, etc., which contain or are contaminated with viable hazardous agents. The symbol on these signs shall be the standard fluorescent orange or orange-red color.

Hazard Communication

On site, employees may perform operations which commonly require the use of chemicals that have inherent chemical and physical hazards. General office activities may also involve working with products which contain regulated chemicals. Hazard Communication Standard requires employers to provide information to their employees concerning the hazardous chemicals in the workplace through a formal WHMIS training program, and the provision materials safety data sheets, product label and warning signs. The site Health and Safety Officer shall be responsible for the implementation of the WHMIS program.

Noise

Employee exposure to noise of sufficient intensity and duration can result in hearing damage. Noise-induced hearing loss rarely results from just one exposure; it can progress unnoticed over a period of years. Initial noise-induced hearing loss occurs at the higher frequencies where the consonant portion of speech is found, making communications difficult. Engineering controls such as mufflers on heavy equipment exhausts or on-air release valves are required where possible. If engineering solutions cannot reduce the noise, administrative controls such as increasing the distance between the noise source and the worker or rotation of jobs between workers in the high noise area should be used if possible.



Housekeeping

All places of employment including outside areas should be kept as clean as the nature of the work allows, but must be kept free and clear of debris, trash, scrap, spills or other extraneous materials which could create a health hazard or cause an accident. Proper layout, spacing and arrangement of equipment, facilities, and machinery are essential to good housekeeping, allowing orderly operation and avoiding congestion. Maintain the floor of every work area so far as practicable, in a dry condition. Where wet processes are used, maintain drainage and provide removable false floors, platforms, mats, or other dry standing places. When necessary or appropriate, provide waterproof footwear. To facilitate cleaning, every floor, working place, and passageway will be as smooth as feasible but allowing for the need to provide non-skid flooring where appropriate. Floors shall not be cleaned with flammable materials or materials creating significant toxic hazards.

Emergency Eyewash Facilities

Emergency eyewash facilities meeting the requirements of ANSI Z358.1 shall be provided in all areas where the eyes of any employee may be exposed to corrosive materials. All such emergency facilities shall be located where they are easily accessible to those in need.

Regular Inspections & Monitoring

The identification of unsafe conditions and work practices by means of Safety Inspections and Audits during working hours is a major means of accident prevention.

Responsibilities

Superintendents and Supervisors are responsible for continuously monitoring the workplace and work activities in order to ensure that their subordinates are working safely and in a safe workplace.

Employees must be constantly on guard against hazards, whether real or perceived, and report them immediately to their Supervisor. Hazards include unsafe or incorrect actions or work processes, defective or improperly maintained equipment, or the activities of fellow employees.

Management will ensure that:

- Supervisors conduct site safety inspections. The results of the inspection shall be recorded on the Inspection Report Form. Necessary corrective action shall be undertaken and recorded on the form and a copy of the form sent to the Superintendent.

Inspection Process

The inspectors will tour the area thoroughly, observing environmental conditions, the physical condition of work areas, equipment and structures, and hazardous materials.

Some considerations include:

Is the workplace tidy?

- Is the workplace environment hazardous or unhealthy?



- Are the instructions for hazardous work processes in Place and in use? Are they adequate?
- Are employees complying with the Safety Program?
- Are controlled products clearly marked and stored? Are Material Safety Data Sheets current and available?
- Are employees familiar with the instructions for their jobs?
- Are first aid provisions in place and known to employees?

All deficiencies, whether real or suspected, will be recorded in accordance with current procedures Inspection Report form. Deficiencies should be recorded as they are discovered and not left to memory. Unsafe conditions must be reported to the Supervisor IMMEDIATELY.



2. First Aid Services & Equipment

First Aid

Management has the responsibility to ensure that First Aid services are supplied and maintained for employees. This shall be done by providing appropriate First Aid stations and rooms throughout the facility as well as providing basic First Aid equipment in company vehicles on site.

Any employee sustaining injury or illness that is, or may be, job related shall report to his or her Supervisor as soon as possible.

Management shall ensure that a record of every injury or illness which requires first aid treatment is kept in the Accident Record book. The Accident Record book shall be kept for at least ten years and shall be monitored, by management, as part of regular management meetings.

First Aid statistics shall be reviewed by Management to determine trends and recommend corrective action.

Communication

The Manager shall ensure that a means of communication is provided, throughout the facility, which will allow for First Aid services to be obtained expeditiously.

Rescue Team

A sufficient number of qualified persons will be trained as rescue team members and organized so that they will be readily available at the work site when persons are normally working. A Rescue Plan shall be developed and submitted to the Superintendent. This program shall be maintained current and updated to reflect the current status of the work site.

3. General Safety Training Policy

Purpose

Training is one of the most important elements of any health & safety program. Training is designed to enable employees to learn their jobs properly and to reinforce safety policies and procedures. Safety Training also provides an opportunity to communicate safety principles and commitment of management to a safe workplace.

The purpose of the policy is to ensure that:

- An annual review of the health and safety training needs within the group of companies is conducted;
- Individuals are aware of and understand that only properly authorized and instructed employees are permitted to do a job;
- All employees are aware of their rights, responsibilities and corporate policies and protocols, including the right to refuse an unsafe task;
- TMS provides regular emergency response drills;
- TMS ensures all new employees or employees learning a new task are closely supervised until they are exhibiting signs of competency;
- Supervisors and Managers familiar with the protocols and are trained to recognize hazards and understand their responsibilities for reporting and correcting hazards;
- TMS complies with all relevant Acts and Regulations.

Responsibilities

Management and supervisors will:

- Determine the required training standards for each position in the corporation(s) and review this annually.
- Ensure that only those trained and authorized to do so perform tasks.
- Ensure that employees are trained and monitored for safe practices.
- Ensure that every reported incident of workplace safety violations are investigated, documented and potential areas for improvement identified.
- Monitor the effectiveness of the various training programs and methods.
- Ensure personnel files reflect the training completed and that employees are signing off on training events.

Employees will:

- Employees are required to be familiar with and follow the procedures that are in place to protect them from workplace violence and in that respect, they are encouraged to ask questions, request clarification and review the company's related documentation.
- Employees will participate as required in orientation, training workshops and meetings.
- All employees should communicate concerns they have about their training requirements to their supervisor.



- Employees are to adhere to the Code of Conduct and rules, failure to do so can trigger a need for them to retake general safety training.
- Sign off on all training and orientation sessions acknowledging understanding of material

The Committee will:

- Annually evaluate any training that has been taken and include the findings in an annual report to management.
- Select topics for information bulletins.
- Review incident reports and trends for the purpose of ensuring staff are appropriately trained to handle emergencies and deal with workplace hazards.
- Review training opportunities offered and select or recommend them to supervisors.

Training Program Outline

The management of TMS is committed to providing our employees with a safe work environment and that means that all employees must be aware of the rules and know the hazards associated with their work environment or tasks. An important component of this is to ensure all employees get a thorough orientation to safety, regular information bulletins on timely topics and workshops or courses to coincide with new responsibilities or to discipline behaviour if the committee recommends additional training. The goal of this protocol will be to continually improve health and safety in the workplace.

General Safety Training

- a) Regulations require workers to be given necessary instruction and orientation and are adequately supervised. Situations requiring safety training include:
- Reassignment to a new job
 - Introduction of new equipment
 - Change in work procedure
 - Inadequate performance
 - Injury, accident or incident, even a near miss
 - Complaint of rule violations
- b) Subject to availability all employees will attend provincial health and safety boards sponsored workshops.
- c) Toolbox Safety Meetings: The safety talk is designed for discussion leaders to use in preparing safety meetings.
- Set a specific time and date for your safety meeting. Publicize your meeting so everyone involved will be sure to attend.



- Review this safety talks before the meeting and become familiar with its content. Make notes about the points made in this talk that pertain to your workplace. You should be able to present the material in your own words and lead the discussion without reading it.
- Seating space is not absolutely necessary, but arrangements should be made so that those attending can easily see and hear the presentation.
- Collect whatever materials and props you will need ahead of time. Try to use equipment in your workplace to demonstrate your points.
- Give the safety talk in your own words. Use the printed talk merely as a guide.
- The purpose of a safety meeting is to initiate discussion of safety problems and provide solutions to those problems. Encourage employees to discuss hazards or potential hazards the encounter on the job. Ask them to suggest ways to improve safety in their area.
- Don't let the meeting turn into a gripe session about unrelated topics. As discussion leader, it is your job to make sure the topic is safety. Discussing other topics wastes time and can ruin the effectiveness of your safety meeting.
- At the end of the meeting, ask employees to sign the sheet of this talk as a record that they attended the safety meeting. Keep this talk on file for your records.

New Employee Safety Orientation

A New Employee Safety Orientation Class is a part of the overall orientation program that all new hires must attend. This orientation is conducted by the Health & Safety Officer. The safety training in these classes consists, but not limited to the listed topics below:

- General Safety Rules & Policies (includes Right to Refuse Work)
- Hazard Communication
- Emergency Plans: Routes & Assembly Locations
- Procedures for safety violations, accidents, near-miss
- Workplace Violence and Harassment policies

After completion of Safety Orientation Class, the new hire's supervisor will provide additional specific safety training applicable to the assigned tasks. This training will consist of, but is not limited to:

- Emergency plans, evacuation routes, assembly locations and emergency actions
- Rules for reporting safety violations, accidents, and near-misses
- Safe Operating Procedures
- Location of First Aid Facilities
- Location & use of Emergency Eye Wash & Shower Stations
- Location and use of Fire Alarm Pull Boxes and Fire Extinguishers
- Use of tools & equipment, lifting & material handling equipment



- Machine & Tool Guards, Emergency Stop Control Locations & Use
- Proper Ergonomic procedures & lifting techniques for the tasks assigned
- Safety equipment & personal protective equipment
- Hazard Communication: Specific hazards for work area chemicals
- General Hazardous Waste Operations

Record of this training will be recorded on the Job Safety Training Checklist. This record will be filled out by the Employee's immediate supervisor and filed in the Employee's Personnel Record.

4. Hazard Communication & Chemical/Pharmaceutical Safety

Purpose

This document serves as the Tactical Medical Service Hazard Communication Program. It provides detailed safety guidelines and instructions for receipt, use and storage of chemicals and medications at our facility by employees and contractors.

Responsibilities

Management

- Ensure compliance with this program
- Conduct immediate corrective action for deficiencies found in the program
- Maintain an effective Hazard Communication training program
- Make this plan available to employees or their designated representative

Inventory Warehouse Person

- Ensure all received containers are properly labelled and that labels are not removed or defaced
- Ensure all shipped containers are properly labelled
- Ensure received Material Safety Data Sheets (MSDS) and prescription forms are properly distributed

Purchasing Agent

- Obtain, from the manufacturer, MSDS for chemicals purchased from retail sources



- Obtain information about every prescribed and non-prescribed medication from providing pharmacist

Safety Officer

- Maintain a list of hazardous chemicals using the identity that is referenced on the MSDS
- Maintain a list of medications on work sites
- Monitor the effectiveness of the program
- Monitor employee training to ensure effectiveness
- Keep Project Management informed of necessary changes
- Ensure that on-site MSDSs are available for all chemical, as required by law
- Monitor facility for proper use, storage and labelling of controlled products and medications

Supervisors

- Comply with all specific requirements of the program
- Provide specific chemical safety training for assigned employees
- Provides medical personnel with training and updates on medication protocols
- Ensure chemicals and medications are properly used, stored and labelled
- Ensure only the minimum amount of hazardous chemicals necessary is kept at work stations
- Ensure that up-to-date MSDSs are readily accessible to all employees in the work area.

Employees

- Comply with chemical safety requirements of these programs and protocols
- Report any problems with storage or use of chemicals
- Enforce medication cabinet safety
- Immediately report spills or suspected spills of chemicals
- Use only those chemicals for which they have been trained
- Use medications according to protocols and/or under physician's supervision
- Use medications and chemicals only for specific assigned tasks in the proper manner

General Program Information

This written Hazard Communication Plan (HAZCOM) has been developed based on OSHA Hazard Communication Standard and consists of the following elements:

- Identification of Hazardous Materials
- Product Warning Labels
- Material Safety Data Sheets (MSDS)



- Written Hazard Communication Program
- Effective Employee Training

Some chemicals are explosive, corrosive, flammable, or toxic. Other chemicals are relatively safe to use and store but may become dangerous when they interact with other substances. To avoid injury and/or property damage, persons who handle chemicals in any area must understand the hazardous properties of the chemicals. Before using a specific chemical, safe handling methods and health hazards must always be reviewed.

Supervisors are responsible for ensuring that the equipment needed to work safely with chemicals is accessible and maintained for all employees on all shifts.

Employee Training

Subsequent Orientation Training

As required, employees shall receive safety orientation training covering the elements of the HAZCOM and Right to Know Program. This training will consist of general training covering:

- Location and availability of the written Hazard Communication Program.
- Location and availability of the List of Chemicals used on site.
- Methods and observation used to detect the presence or release of a hazardous chemical.
- The specific physical and health hazard of all chemicals.
- Specific control measures for protection from physical or health hazards.
- Explanation of the chemical labelling system.
- Location and use of MSDS.

Job Specific Training

Employees will receive on the job training from the Safety Officer. This training will cover the proper use, inspection and storage of necessary personal protective equipment and chemical safety training for the specific chemicals they will be using or will be working around.

Immediate On-the-Spot Training

This training will be conducted by the Safety Officer for any employee that requests additional information or exhibits a lack of understanding of the safety requirements.

Non-Routine Tasks

Non-routine tasks are defined as working on, near, or with unlabeled piping, unlabeled containers of an unknown substance, confined space entry where a hazardous substance may be present



and/or a one-time task using a hazardous substance differently than intended (example: using a solvent to remove stains from tile floors).

Steps for Non-Routine Tasks

- Step 1: Hazard Determination
- Step 2: Determine Precautions
- Step 3: Specific Training & Documentation
- Step 4: Perform Task

All non-routine tasks will be evaluated by the Site Manager and Safety Officer before the task commences, to determine all hazards present. This determination will be conducted with quantitative/qualitative analysis (air sampling, toxic gas detection, substance identification/analysis, etc., as applicable). If needed, equipment shall be leased or sub-contracted, if not readily available at the site.

Once the hazard determination is made, the Site Superintendent and Safety Officer will determine the necessary precautions needed to either remove the hazard, change to a non-hazard, or protect from the hazard (use of personal protective equipment) to safeguard the Employees present.

Off-site use or transportation of chemicals

When controlled products are to be transported, the transporter or Site Manager must verify if such products can be legally transported, under the Transportation of Dangerous Goods Regulation (TDGR). A person certified in TDGR must verify what provisions are needed for the transportation of products. This person should also complete Shipping Declarations both for expedition to and return from sites.

General Chemical Safety

Assume all chemicals are hazardous. The number of hazardous chemicals and the number of reactions between them is so large that prior knowledge of all potential hazards cannot be assumed. Use chemicals in as small quantities as possible to minimize exposure and reduce possible harmful effects.

Task Evaluation

Each task that requires the use of chemicals should be evaluated to determine the potential hazards associated with the work. This hazard evaluation must include the chemical or combination of chemicals that will be used in the work, as well as other materials that will be used near the work. If a malfunction during the operation has the potential to cause serious injury or property damage, a Safe Operational Procedure (SOP) should be prepared and followed. Operations must be planned to minimize the generation of hazardous wastes.



Chemical Storage

The separation of chemicals (solids or liquids) during storage is necessary to reduce the possibility of unwanted chemical reactions caused by accidental mixing. Explosives should be stored separately outdoors. Use either distance or barriers (e.g., trays) to isolate chemicals into the following groups:

- **Flammable Liquids:** store in approved flammable storage lockers, or another suitable area or container on site.
- **Acids:** treat as flammable liquids
- **Bases:** do not store bases with acids or any other material
- **Other liquids:** ensure other liquids are not incompatible with any other chemical in the same storage location.

Chemicals will not be stored in the same refrigerator used for food storage. Refrigerators used for storing chemicals must be appropriately identified by a label on the door.

Container Labels

It is extremely important that all containers of chemicals are properly labelled. This includes every type of container from a 5000-gallon storage tank to a spray bottle of degreaser. The following requirements apply:

- All controlled product containers will have the appropriate label, tag or marking prominently displayed, that clearly indicates the identity, safety concerns and health hazards that are associated with the product.
- Portable containers which contain a small amount of chemical need not be labelled if they are used immediately that shift, but must be under the strict control of the employee using the product.
- All warning labels, tags, etc., must be maintained in a legible condition and not be defaced. Weekly Inspections by Safety Officer will check for compliance of this rule.
- Incoming chemicals are to be checked for proper labelling.

Emergencies and Spills

In case of an emergency, implement the proper Emergency Action Plan:

- Evaluate risk for personal safety and physical integrity
- Evacuate people from the area.
- Isolate the area.
- If the material is flammable, turn off ignition and heat sources.



- Only personnel specifically trained in emergency response are permitted to participate in chemical emergency procedures beyond those required to evacuate the area.
- Alert the Site Superintendent or site Safety Officer, who will determine what other measures are needed to mitigate the situation.

Housekeeping

- Maintain the smallest possible inventory of chemicals to meet immediate needs.
- Periodically review stock of chemicals on hand.
- Ensure that storage areas, or equipment containing large quantities of chemicals, are secure from accidental spills.
- Rinse emptied bottles that contain acids or inflammable solvents before disposal.
- Recycle unused laboratory chemicals wherever possible.
- DO NOT Place hazardous chemicals in salvage or garbage receptacles.
- DO NOT Pour chemicals onto the ground.
- DO NOT Dispose of highly toxic, malodorous chemicals down sinks or sewer drains.
- All medications are to be sent back to TMS office for proper destruction procedure by pharmacist and as a part of inventory procedure or Donation to a training agency that has a need for specific medications.

Contractors and Sub-contractors

All contractors and sub-contractors working at the jobsite is required to follow the requirements of this program. TMS will provide contractors and sub-contractors with information with respect to:

- Required personal protective clothing
- Location of MSDS
- Precautions to be taken to protect contractor employees
- Potential exposure to hazardous substances
- Chemicals used in or stored in areas where they will be working
- Location and availability of Material Safety Data Sheets
- Labelling system for chemicals



Glossary of Terms

Medication: Prescribed or non-prescribed drugs including narcotics. **Chemical:** any element, chemical compound, or mixture of elements and/or compounds.

Combustible liquid: means any liquid having a flash point at or above 100 deg. F (37.8 deg. C), but below 200 deg. F (93.3 deg. C). Exception: any mixture having components with flash points of 200 deg. F (93.3 deg. C), or higher, the total volume of which make up 99 percent or more of the total volume of the mixture.

Compressed gas: any compound that exhibits:

(i) A gas or mixture of gases having, in a container, an absolute pressure exceeding 40 psi at 70 deg. F.

(ii) A gas or mixture of gases having, in a container, an absolute pressure exceeding 104 psi at 130 deg. F. regardless of the pressure at 70 deg. F.

(iii) A liquid having a vapor pressure exceeding 40 psi at 100 deg. F.

Container: any bag, barrel, bottle, box, can, cylinder, drum, reaction vessel, storage tank, or the like that contains a hazardous chemical. For purposes of this section, pipes or piping systems, and engines, fuel tanks, or other operating systems in a vehicle, are not considered to be containers.

Employee: a worker who may be exposed to hazardous chemicals under normal operating conditions or in foreseeable emergencies. Workers such as office workers who encounter hazardous chemicals only in non-routine, isolated instances are not covered.

Employer: a person engaged in a business where chemicals are either used, distributed, or are produced for use or distribution, including a contractor or subcontractor.

Explosive: a chemical that causes a sudden, almost instantaneous release of pressure, gas, and heat when subjected to sudden shock, pressure, or high temperature.

Exposure or exposed: an employee is subjected in the course of employment to a chemical that is a physical or health hazard and includes potential (e.g. accidental or possible) exposure. Subjected in terms of health hazards includes any route of entry (e.g. inhalation, ingestion, skin contact or absorption.)

Flammable: a chemical that falls into one of the following categories:

(i) "Aerosol, flammable" means an aerosol that yields a flame projection exceeding 18 inches at full valve opening, or a flashback (a flame extending back to the valve) at any degree of valve opening;

(ii) "Gas, flammable" means: (A) A gas that, at ambient temperature and pressure, forms a flammable mixture with air at a concentration of thirteen (13) percent by volume or less; or (B) A gas that, at ambient temperature and pressure, forms a range of flammable mixtures with air wider than twelve (12) percent by volume, regardless of the lower limit;



(iii) "Liquid, flammable" means any liquid having a flash point below 100 deg. F., except any mixture having components with flash points of 100 deg. F. or higher, the total of which make up 99 percent or more of the total volume of the mixture.

(iv) "Solid, flammable" means a solid, other than a blasting agent or explosive, that is liable to cause fire through friction, absorption of moisture, spontaneous chemical change, or retained heat from manufacturing or processing, or which can be ignited readily and when ignited burns so vigorously and persistently as to create a serious hazard. A chemical shall be considered to be a flammable solid if it ignites and burns with a self-sustained flame at a rate greater than one-tenth of an inch per second along its major axis.

Flash point: the minimum temperature at which a liquid gives off a vapor in sufficient concentration to ignite.

Hazardous chemical: any chemical which is a physical hazard or a health hazard.

Hazard warning: any words, pictures, symbols, or combination appearing on a label or other appropriate form of warning which convey the specific physical and health hazard(s), including target organ effects, of the chemical(s) in the container(s). (See the definitions for "physical hazard" and "health hazard" to determine the hazards which must be covered.)

Health hazard: a chemical for which there is evidence that acute or chronic health effects may occur in exposed employees. The term "health hazard" includes chemicals which are carcinogens, toxic or highly toxic agents, reproductive toxins, irritants, corrosives, sensitizers, hepatotoxins, nephrotoxins, neurotoxins, agents which act on the hematopoietic system, and agents which damage the lungs, skin, eyes, or mucous membranes.

Identity: any chemical or common name which is indicated on the material safety data sheet (MSDS) for the chemical. The identity used shall permit cross-references to be made among the required list of hazardous chemicals, the label and the MSDS.

Immediate use: the hazardous chemical will be under the control of and used only by the person who transfers it from a labeled container and only within the work shift in which it is transferred.

Label: any written, printed, or graphic material displayed on or affixed to containers of hazardous chemicals.

Material safety data sheet (MSDS): written or printed material concerning a hazardous chemical which is prepared in accordance with OSHA Standard 1910.1200 requirements.

Mixture: any combination of two or more chemicals if the combination is not, in whole or in part, the result of a chemical reaction.

Oxidizer: means a chemical other than a blasting agent or explosive, that initiates or promotes combustion in other materials, thereby causing fire either of itself or through the release of oxygen or other gases.

Physical hazard: a chemical that it is a combustible liquid, a compressed gas, explosive, flammable, an organic peroxide, an oxidizer, pyrophoric, unstable (reactive) or water reactive.



- Pyrophoric:** a chemical that will ignite spontaneously in air at a temperature of 130 deg. F. or below.
- Specific chemical identity:** the chemical name, Chemical Abstracts Service (CAS) Registry Number, or any other information that reveals the precise chemical designation of the substance.
- Unstable (reactive):** a chemical which in the pure state, or as produced or transported, will vigorously polymerize, decompose, condense, or will become self-reactive under conditions of shocks, pressure or temperature.
- Use:** to package, handle, react, emit, extract, generate as a by-product, or transfer.
- Water-reactive:** a chemical that reacts with water to release a gas that is either flammable or presents a health hazard.
- Work area:** a room or defined space on site where hazardous chemicals are produced or used, and where employees are present.
- Workplace:** an establishment, job site, or project, at one geographical location containing one or more work areas.

MSDS Information

Material Safety Data Sheets (MSDS) are provided by the chemical manufacturer to provide additional information concerning safe use of the product. Each MSDS provides:

- Common Name and Chemical Name of the material
- Name, address and phone number of the manufacturer
- Emergency phone numbers for immediate hazard information
- Date the MSDS was last updated
- Listing of hazardous ingredients
- Chemical hazards of the material
- Information for identification of chemical and physical properties

Information Chemical Users must know

Fire and/or Explosion Information

- Material Flash Point, auto-ignition temperature and upper/lower flammability limits
- Proper fire extinguishing agents to be used
- Firefighting techniques
- Any unusual fire or explosive hazards
- Chemical Reaction Information

Stability of Chemical

- Conditions and other materials which can cause reactions with the chemical
- Dangerous substances that can be produced when the chemical reacts

Control Measures

- Engineering Controls required for safe product use
- Personal protective equipment required for use of product
- Safe storage requirements and guidelines
- Safe handling procedures

Health Hazards

- Permissible Exposure Limit (PEL) and Threshold Limit Value (TLV)
- Acute or Chronic symptoms of exposure
- Main routes of entry into the body
- Medical conditions that can be made worse by exposure
- Cancer causing properties if any
- Emergency and First Aid treatments

Spill & Leak Procedures

- Clean up techniques
- Personal Protective Equipment to be used during cleanup
- Disposal of waste & cleanup material

Information Medications administrators must know

Primary and secondary effect(s) of medications

- Patient's background (ongoing meds treatments ,allergies)
- Objective of given medications

Dosage

- Age and weight dependent

Life and half-life of medications

- Time lapse when medication is effective and duration before complete systemic elimination

Posology

- Unit calculation (ml, mg, etc...)
- Repeating doses
- Prescription dependent

Ways of administration

- IOs, intramuscular, intravenous, sub cutaneous, topic, sublingual spray, intraosseous

Potential treatment options in case of allergic reaction to medication

- Signs and symptoms
- Treatment options
- Medical emergency backup

Potential treatment options in case of overdose

- Signs and symptoms
- Treatment options
- Medical emergency backup

Medications source

- Providing pharmacist contact information

Medications disposal procedures

- On site temporary disposal
- Permanent disposal
- Expiration dates

Employee Use of MSDS

For MSDS use to be effective, employees must:

- Know the location of the MSDS
- Understand the major points for each chemical
- Check MSDS when more information is needed or questions arise
- Be able to quickly locate the emergency information on the MSDS
- Follow the safety practices provided on the MSDS

5. Medical Personnel Safety and Specific Risks

Purpose

The purpose of this section is to familiarize medical staff with elements involving risks in their daily tasks and ever-changing intervention environments, both inside the site infirmary and on the field.



Infirmery hazards:

Inside the clinic, specific tasks have been determined to require a higher level of awareness

- Working with needles
- Biohazard management
- Infectious diseases prevention and containment
- Medication management
- Patients with potentially violent behavior
- Storing oxygen

Working with needles

Working with needles requires specific training for the manipulation of syringes, the extraction of liquids from breakable glass vials and rubber topped vials, and ways of injections. Disposal of syringes should be regarded as a part of the manipulation protocol.

Biohazard management

The proper disposal of contaminated equipment and supplies is a major health and safety concern and should be taken care of with great consideration, in order to prevent viral and bacterial contamination of the equipment, supplies and personnel. The employer will provide the workers with biohazard containers adapted to the tasks to perform. It is the employee's duty to use them and to ensure that they are disposed of properly. Work instruction will be given for every work site concerning the available options for adequate disposal.

Infectious diseases prevention and containment

The on sites medical personnel have the responsibility to limit the spreading of infections of any nature, enforce their containment, and inform immediate supervisor of their presence and nature, both for their own safety and the worker's health and well-being.

Medication management

A variable level of risk comes with storage, manipulation, and distribution of pharmaceutical products and precautions should be taken for each step;

Storage in proper temperature should be observed at all-time even during shipping. The "chain of cold" or "no freeze" directives must be known every time a handover is made. Proper documentation should always follow the associated medications and available to show to authorities (i.e. custom agents and other law enforcement officers)

Manipulation must be made carefully and, in a manner, to ensure that neither the medication itself, nor the containers and vectors of delivery are contaminated in any way.

Distribution of any medications to a tier (patient or transporter) must always be inventoried and done in accordance with prescriptions, if any. The amount of medication must be limited to minimal



dosage in accordance with directions, and no doses are to be given in advance to a patient. Medications should preferably be administered under direct supervision.

Patient with potentially violent behavior

A risk exists both for medical personnel and patient when a patient disorganises himself and threatens others. If such a situation is foreseen, the employee must require help from his supervisor and security enforcement personnel on site. TMS employees should never be perceived as a coercive authority and keep a helping /helped bond with everyone. As soon as an aggressive behavior is detected, the employee should adopt the attitude described in section 34, Recognizing and Dealing with Potentially Violent Situations or Harassment. Workers with violent behavior should ultimately be removed from site. Refer with site superintendent for these procedures. The local authorities and RCMP phone numbers will be provided by the employer in the “emergency contact list”.

Storing oxygen

Oxygen is an oxidizer stored under pressure for medical use inside the clinic and out on the field. Inside the clinic, the tanks must be secure to a wall or other non-mobile object. Proper identification should be posted on the door outside of the clinic, and tags on the tanks must stay in place. Separate the detachable sections of the identification tags at each step of use (i.e. full, in use or empty) schedule function checks must be performed on every tank and the master inventory kept up to date. When out on the field, the tanks should be carried in the transport bags. Never leave a tank standing, always put them gently on the on the ground in a horizontal position in a safe spot. At the arrival on a site, oxygen transport boxes are to be kept, and put aside for the return to the office with proper identification and paperwork (waybill, dangerous goods declarations, and packing slip). When transported on site, verify with pilots, vehicles drivers, if regulation compliance is being observed at all time.

Field interventions hazards:

Considering the many different locations where emergency response could be needed, the medical personnel awareness of potential risk is paramount for environments such as:

- Northern Canadian tundra and arctic
- Boreal and mixed forests
- Underground mines and open pits mines
- Extreme climate environments
- Medevac vehicles
- Remote and isolated areas



Northern Canadian and arctic

Working in remote sites in the tundra and arctic involves many risks inherent to the land such as difficulties due to transportations over long distances, off grid communication systems, patient transport delays because of ever changing weather and possibility to be stranded on the land. Every employee of TMS should be aware of these challenges and must always be re-evaluating the situation in order to avoid putting themselves and other team members at risk. The presence of wildlife is constant and should not be forgotten.

Boreal and mixed forests

Challenges in the forest are legion, from mosquito bites, to grizzly bear attack. It is important to be properly dressed for multiple climates, and never forget that even at 10°C, the risk of hypothermia exists. A field intervention bag is provided for each site, and it must be adapted to the needs of the area by the employee. Always make sure that all equipment is functional and readily available. Visiting working sites that are away from camp and collaborating with camp superintendent on an emergency plan is mandatory. Staying in designated paths diminishes the risk of getting lost in the bush, but doesn't eradicate it completely, therefore a functional compass, map and GPS should be carried by each team.

Underground mines and open pits

Working on a mining site requires many skillsets, and collaboration between each trade is important. The mining rescue team and TMS "on site" medical personnel must work together and practice a lot for fine tuning and efficient response. Evacuations are to be the business of trained professionals, and the improvisation should be kept at minimum level.

Extreme climate environments

Good Material and physical preparation are necessary in extreme climates from 40°C to -60°C. verification of gear and vehicles must be done daily, and defects reported to supervisor immediately. Taking time to adapt clothing to effort and climatic conditions will keep comfortable and efficient when workload demands the most. Hydration, heat and cold related challenges should not be underestimated; therefore a sufficiently big water container should always be full and ready to be taken out to the field, even during the winter.

Medevac vehicles

Every job site has different medevac needs involving many different means of transportation. Operation of any vehicle must be made by trained and authorised personnel only. Medevac vehicle generally are stretcher capable, and installation is sometime regulated. Be informed of those regulations. If a vehicle is designated for medevac, a daily circle check must be performed,



malfunctions corrected immediately. The gas tank should always be full, and on site, all vehicles should be parked forward; in a way to be moved without backing up out of their parking lots. Some vehicles are not safe for medevac purpose (motorcycles, three-wheelers to name a few) and should never be used as such. In a situation with many responders, the person who has the highest level of medical knowledge should attend the patient, and the driver should drive in a safely manner, communicating his moves, and be ready to immobilize the vehicle to help attend the patient. Respect of speed limits and defensive driving are mandatory at all time.

Remote and isolated areas

It is important to be aware of the availability of any material resource in a remote area, and to manage them wisely, for it might take long before being resupplied. The employee must know how to operate every communication system. And be aware that they might fail; always have a plan B. When planning with other team members and going separate way, if you are not able to communicate with the rest of the team: try to stick to the plan as much as possible, that way your co-workers know your whereabouts.



Preparation prior to work in remote locations

Knowledge of work scope specifics

- Enterprise structure:

Knowing the type of work performed and the objectives of the client helps determining their needs and expectations.

- Geographic & topographic challenges:

Knowing the exact location of the site, closest communities and available services is an important part of the intervention capacity.

Physical fitness

- Physical fitness is mandatory and greatly encouraged by the Tactical Medical Service management team!

Briefing with Tactical Medical Service project manager

- Briefing with TMS's PM helps clarifying exact duties and project particularities. Communication within the enterprise is a big part of the success of TMS!

6. Electrical Safety

Purpose

The Electrical Safety program is designed to prevent electrically related injuries and property damage. This program also provides for proper training of maintenance employees to ensure they have the requisite knowledge and understanding of electrical work practices and procedures. Only employees qualified in this program may conduct adjustment, repair or replacement of electrical components or equipment. Electricity has long been recognized as a serious work-place hazard, exposing employees to such dangers as electric shock, electrocution, fires and explosions.

Responsibilities

Management

- Provide training for qualified and unqualified employees
- Conduct inspections to identify electrical safety deficiencies
- Guard and correct all electrical deficiencies promptly
- Ensure all new electrical installations meet codes and regulations

Employees

- Report electrical deficiencies immediately
- Not work on electrical equipment unless authorized and trained
- Properly inspect all electrical equipment prior to use

Hazard Control

Engineering Controls

- All electrical distribution panels, breakers, disconnects, switches, junction boxes shall be completely enclosed.
- Water tight enclosure shall be used where there is possibility of moisture entry either from operations or weather exposure.
- Electrical distribution areas will be guarded against accidental damage by locating in specifically designed rooms, use of substantial guard posts and rails and other structural means.
- A clear approach and 3 foot side clearance shall be maintained for all distribution panels.
- All conduits shall be fully supported throughout its length. Non-electrical attachments to conduit are prohibited.
- All non-rigid cords shall be provided strain relief where necessary.



Administrative Controls

- Only trained and authorized employees may conduct repairs to electrical equipment.
- Contractors performing electrical work must hold a license for the rated work.
- Areas under new installation or repair will be sufficiently guarded with physical barriers and warning signs to prevent unauthorized entry.
- Access to electrical distribution rooms is limited to those employees who have a need to enter.
- All electrical control devices shall be properly labelled.
- Work on energized circuits is prohibited unless specifically authorized by senior facility management.
- All qualified employees will follow established electrical safety procedures and precautions.

Protective Equipment

- Qualified employees will wear electrically rated safety shoes/boots.
- Tools used for electrical work shall be properly insulated.

Glossary of Terms

Qualified Worker: An employee trained and authorized to conduct electrical work.

Unqualified: Employees who have not been trained or authorized by management to conduct electrical work.

Training

Training for Unqualified Employees

Training for Unqualified Employees is general electrical safety precautions to provide an awareness and understanding of electrical hazards.

Electrical Safety Rules for Non-Qualified Workers

1. Do not conduct any repairs to electrical equipment
2. Report all electrical deficiencies to your supervisor
3. Do not operate equipment if you suspect an electrical problem
4. Water and electricity do not mix.
5. Even low voltages can kill or injure you



6. Do not use cords or plugs if the ground prong is missing
7. Do not overload electrical receptacles

Electrical Lockout & Tagout Requirements

Application of locks and tags

A lock and a tag shall be placed on each disconnecting means used to de-energize circuits and equipment on which work is to be performed, except as provided for below.

1. The lock shall be attached so as to prevent persons from operating the disconnecting means unless they resort to undue force or the use of tools.
2. Each tag shall contain a statement prohibiting unauthorized operation of the disconnecting means and removal of the tag.
3. If a lock cannot be applied a tag may be used without a lock.
4. A tag used without a lock must be supplemented by at least one additional safety measure that provides a level of safety equivalent to that obtained by use of a lock. Examples of additional safety measures include the removal of an isolating circuit element, blocking of a controlling switch, or opening of an extra disconnecting device.
5. A lock may be placed without a tag only under the following conditions:
 - a. *Only one circuit or piece of equipment is de-energized, and*
 - b. *The lockout period does not extend beyond the work shift, and*
 - c. *Employees exposed to the hazards associated with reenergizing the circuit or equipment are familiar with this procedure.*

Common Pitfalls in Lock-out Systems

1. The Lock-out procedure is not enforced and supervised.
2. Failure of employees to use locks.
3. Locking one lock through another.
4. Leaving key in lock.
5. Asking others to lock-out for you.
6. Failure to identify ownership of lock.
7. Failure to verify that equipment is inoperative.
8. Pulling fuses and not locking out.
9. Failure to identify, and lock-out all switches, valves and disconnects to the equipment.
10. Assuming equipment is inoperable.

Warnings and Barricades

Warnings and barricades shall be employed to alert unqualified Employees of the present danger related to exposed energized parts. The following rules apply:



1. Safety signs, warning tags, etc., must be used to warn Unqualified Employees of the electrical hazards present, even temporarily, that may endanger them.
2. Non-conductive barricades shall be used with safety signs to prevent Unqualified Employees access to exposed energized parts or areas.
3. Where barricades and warning signs do not provide adequate protection from electrical hazards, an Attendant shall be stationed to warn and protect Employees.

Powered Equipment Safety Rules

Electrical equipment is defined as cord or plug-type electrical devices which includes the use of flexible or extension cords. Examples of portable electrical equipment included powered hand tools, powered bench tools, fans, radios, etc. The following safety rules apply to portable electrical equipment (PEE):

1. PEE shall be handled in such a manner as to not cause damage. Power cords may not be stapled or otherwise hung in a way that may cause damage to the outer jacket or insulation.
2. PEE shall be visually inspected for damage, wear, cracked or spilt outer jackets or insulation, etc., before use or before each shift. PEE that remain connected once put in place need not be inspected until relocated. Any defects; such as cracked or split outer jackets or insulation must be repaired, replaced or placed out of service.
3. Always check the compatibility of cord sets and receptacles for proper use.
4. Ground type cord sets may only be used with ground type receptacles when used with equipment requiring a ground type conductor.
5. Attachment plugs and receptacle may not be altered or connected in a way that would prevent the proper continuity of the equipment grounding conductor. Adapters may not be used if they interrupt the continuity of the grounding conductor.
6. Only portable electrical equipment that is double insulated or designed for use in areas that are wet or likely to contact conductive liquids may be used.
7. Employees that are wet or have wet hands may not handle PEEs (plug-in, un-plug, etc.). Personal protective equipment must be used when handling PEEs that are wet or covered with a conductive liquid.
8. Locking-type connectors shall be properly secured after connection to a power source.

Electrical Circuit Safety Procedures

Electrical power and lighting circuits are defined as devices specifically designed to connect, disconnect or reverse circuits under a power load condition. When these circuits are employed, the following rules apply:



1. Cable connectors (not of load-break type) fuses, terminal plugs or cable splice connectors may not be used, unless an emergency, to connect, disconnect or reverse in place of proper electrical circuits.
2. After a protective circuit is disconnected or opened, it may not be connected or closed until it has been determined that the equipment and circuit can be safely energized.
3. Overcurrent protectors of circuits or connected circuits may not be modified, even on a temporary basis, beyond the installation safety requirements.
4. Only Qualified Employees may perform test on electrical circuits or equipment.
5. Test equipment and all associated test leads, cables, power cords, probes and connectors shall be visually inspected for external damage before use. Any damage or defects shall be repaired before use or placed out of service.
6. Test equipment shall be rated to meet or exceed the voltage being tested and fit for the environment in which it is being used.
7. Where flammable or ignitable materials are stored, even occasionally, electrical equipment capable of igniting them may not be used unless measures are taken to prevent hazardous conditions from developing.

Fall Prevention

Purpose

Slips, trips, and falls constitute the majority of general industry accidents. They cause 15% of all accidental deaths and are second only to motor vehicles as a cause of fatalities. Active participation by management, supervisors and employees is necessary to prevent hazardous conditions that could result in slips, trips or falls.

Responsibilities

Management

- Conduct routine inspections to ensure all walking and working surfaces are free from slip, trip and fall hazards.
- Conduct training for employees who use ladders, scaffolds or other elevated platforms
- Conduct training in use and inspection of fall prevention & arrest equipment
- Ensure proper ladders are used for specific tasks
- Provide adequate fall prevention & arrest equipment

Employees

- Maintain work areas free from slip, trip & fall hazards
- Correct or immediately report slip, trip and fall hazards
- Use proper ladders for assigned tasks

Hazard Control

Engineering Controls

- Proper construction of elevated locations
- Use of hand, knee and toe rails where required
- Proper design of fixed ladders & stairs
- Adequate lighting in all areas

Administrative Controls

- Training for all employees who work at elevated location
- Routine inspections of ladders, stairs, walking and working surfaces
- Following Housekeeping Program requirements
- Immediate cleanup of material spills

General Requirements

Housekeeping

Simple Housekeeping methods can prevent slip-trip-fall hazards:

- All work areas, passageways, storerooms, and service rooms shall be kept clean and orderly and in a sanitary condition.
- The floor of every area shall be maintained in a clean and, so far as possible, a dry condition. Where wet processes are used, drainage shall be maintained and gratings, mats, or raised platforms shall be provided.
- Every floor, work area and passageway shall be kept free from protruding nails, splinters, holes, or loose boards.

Aisles and Passageways

- Aisles and passageways shall be kept clear and in good repair with no obstruction across or in aisles that could create a hazard.
- Permanent aisles and passageways shall be appropriately marked.
- Where mechanical handling equipment is used, aisles shall be sufficiently wide.

Improper aisle widths coupled with poor housekeeping and vehicle traffic can cause injury to employees, damage the equipment and material, and can limit egress in emergencies.

Floor Loading Protection

Load rating limits shall be marked on plates and conspicuously posted. It shall be unlawful to place, cause, or permit to be placed, on any floor or roof of a building, or other structure, a load greater than that for which such floor or roof is approved.

Guarding Floor & Wall Openings

Floor openings and holes, wall openings and holes, and the open sides of platforms may create hazards. People may fall through the openings or over the sides to the level below. Objects, such as tools or parts, may fall through the holes and strike people or damage machinery on lower levels.

Protection for Floor Openings

Standard railings shall be provided on all exposed sides of a stairway opening, except at the stairway entrance.



For infrequently used stairways, where traffic across the opening prevents the use of a fixed standard railing, the guard shall consist of a hinged floor opening cover of standard strength and construction along with removable standard railings on all exposed sides, except at the stairway entrance.

A "standard railing" consists of top rail, mid rail, and posts, and shall have a vertical height of 42 inches nominal from the upper surface of top rail to floor, platform, runway, or ramp level. Nominal height of mid rail is 21 inches.

A "standard toeboard" is 4 inches nominal in vertical height, with not more than ¼-inch clearance above floor level. Floor openings may be covered rather than guarded with rails.

When the floor opening cover is removed, a temporary guardrail shall be in place, or an attendant shall be stationed at the opening to warn personnel. Every floor hole into which persons can accidentally walk shall be guarded by either:

- A standard railing with toeboard, or
- A floor hole cover of standard strength and construction.

While the cover is not in place, the floor hole shall be constantly attended by someone or shall be protected by a removable standard railing.

Protection of Open-Sided Floors, Platforms, and Runways

Every open-sided floor or platform 4 feet or more above adjacent floor or ground level shall be guarded by a standard railing on all open sides, except where there is an entrance to a ramp, stairway, or fixed ladder. The railing shall be provided with a toeboard wherever, beneath the open sides:

- Persons can pass
- There is moving machinery, or
- There is equipment with which falling materials could create a hazard.

Every runway shall be guarded by a standard railing, or the equivalent, on all sides 4 feet or more above floor or ground level. Wherever tools, machine parts, or materials are likely to be used on the runway, a toeboard shall also be provided on each exposed side.

Portable Ladders

The chief hazard when using a ladder is falling. A poorly designed, maintained, or improperly used ladder may collapse under the load placed upon it and cause the employee to fall. A ladder is an appliance consisting of two side rails joined at regular intervals by crosspieces on which a person may step to ascend or descend. The various types of portable ladders include:



- Stepladder: A self-supporting portable ladder, non-adjustable in length, having flat steps and hinged back.
- Single Ladder: A non self-supporting portable ladder, nonadjustable in length, consisting of but one section. Its size is designed by overall length of the side rail.
- Extension Ladder: A non self-supporting portable ladder adjustable in length.

Portable Ladder Requirements:

- Portable stepladders longer than 20 feet shall not be used.
- Stepladders shall be equipped with a metal spreader or locking device of sufficient size and strength to securely hold the front and back sections in open position.
- Single ladders longer than 30 feet shall not be used.
- Extension ladders longer than 60 feet shall not be used.
- Ladders shall be maintained in good condition at all times.
- Ladders shall be inspected frequently and those which have developed defects shall be withdrawn from service for repair or destruction and tagged or marked as "Dangerous, Do Not Use."

Proper use of ladders is essential in preventing accidents. Even a good ladder can be a serious safety hazard when used by workers in a dangerous way.

Portable Ladder Safety Precautions:

- Ladders shall be placed with a secure footing, or they shall be lashed, or held in position.
- Ladders used to gain access to a roof or other area shall extend at least 3 feet above the point of support.
- The foot of a ladder shall, where possible, be used at such a pitch that the horizontal distance from the top support to the foot of the ladder is one-quarter of the working length of the ladder (the length along the ladder between the foot and the support).
- The worker shall always face the ladder when climbing up or down.
- Short ladders shall not be spliced together to make long ladders.
- Ladders shall never be used in the horizontal position as scaffolds or work platforms.
- The top of a regular stepladder shall not be used as a step.
- Use both hands when climbing or descending ladders. If material must be handled, hoist it up or down by rope.
- Metal ladders shall never be used near electrical equipment.
- Ladders must not be placed on boxes, barrels, or any unstable base, to obtain more height.



- Ladders must not be placed in front of doors or windows which open towards the ladder, unless precautions have been taken to ensure that the door or window cannot come in contact with the ladder.
- Ladders which have broken or missing steps or rungs, or broken, bent or split side rails must be replaced.

Fixed Ladders

A fixed ladder is a ladder permanently attached to a structure, building or equipment. A point to remember is that fixed ladders, with a length of more than 20 feet to a maximum unbroken length of 30 feet shall be equipped with cages or a ladder safety device.

A "cage" is a guard that is fastened to the side rails of the fixed ladder or to the structure to encircle the climbing space of the ladder for the safety of the person who must climb the ladder. Cages shall extend a minimum of 42 inches above the top of a landing, unless other acceptable protection is provided. Cages shall extend down the ladder to a point not less than 7 feet nor more than 8 feet above the base of the ladder.

Scaffolding Safety

- The footing or anchorage for scaffolds shall be sound, rigid and capable of carrying the maximum intended load without settling or displacement. Unstable objects, such as barrels, boxes, loose brick, or concrete blocks shall not be used to support scaffolds or planks.
- Scaffolds and their components shall be capable of supporting at least four times the maximum intended load.
- Scaffolds shall be maintained in a safe condition and shall not be altered or moved horizontally while they are in use or occupied.
- Damaged or weakened scaffolds shall be immediately repaired and shall not be used until repairs have been completed.
- A safe means must be provided to gain access to the working platform level through the use of a ladder, ramp, etc.
- Overhead protection must be provided for personnel on a scaffold exposed to overhead hazards.
- Guardrails, midrails, and toeboards must be installed on all open sides and ends of platforms more than 10 feet above the ground or floor. Wire mesh must be installed between the toeboard and the guardrail along the entire opening, where persons are required to work or pass under the scaffolds.
- Employees shall not work on scaffolds during storms or high winds or when covered with ice or snow.

7. Flammable Liquids

Purpose

Proper Storage and use of flammable liquids can significantly reduce the possibility of accidental fires and injury to employees. Material Safety Data Sheet (MSDS) for flammable liquids shall be available on site.

Responsibilities

Management

- Provide proper storage for flammable liquids
- Ensure proper training is provided to employees who work with flammable liquids
- Ensure containers are properly labelled

Supervisors

- Provide adequate training in the use and storage of flammable liquids
- Monitor for proper use and storage
- Keep only the minimum amount required on hand
- Ensure MSDS are current for all flammable liquids

Employees

- Follow all storage and use requirements
- Report deficiencies in storage and use to supervisors
- Immediately report spills to supervisors

Hazard Control

Engineering Controls

- Properly designed flammable storage areas
- Ventilated Storage areas
- Grounding Straps on Drums and dispensing points

Administrative Controls

- Designated storage areas
- Limiting amount of flammable liquids in use and storage



- Employee Training
- Limited & controlled access to bulk storage areas
- Posted Danger, Warning and Hazard Signs

Glossary of terms

Flammable Liquid:	a liquid with a flashpoint below 1000F
Class IA:	flashpoint below 730F and boiling point below 1000F
Class IB:	flashpoint below 730F and boiling point above 1000F
Class IC:	flash at or above 730F and below 1000F
Combustible Liquids:	a liquid having a flash point at or above 1000 F.
Class II Combustibles:	flashpoint above 1000F and below 1400F
Class III Combustibles:	flashpoint at or above 1400F
Subclass IIIA:	flashpoint at or above 1400F and below 2000F
Subclass IIIB:	flashpoint at or above 2000F

Substitution

Flammable liquids sometimes may be substituted by relatively safe materials in order to reduce the risk of fires. Any substituted material should be stable and non-toxic and should either be non-flammable or have a high flashpoint.

Storage & Usage of Flammable Liquids

Flammable and combustible liquids require careful handling at all times. The proper storage of flammable liquids within a work area is very important in order to protect personnel from fire and other safety and health hazards.

- Storage of flammable liquids shall be in approved flammable storage lockers or in low value structures. Do not store other combustible materials near flammable storage areas or lockers
- Bulk drums of flammable liquids must be grounded.
- Portable containers of gasoline or diesel are not to exceed 5 gallons
- Safety cans used for dispensing flammable or combustible liquids shall be kept at a point of use.
- Appropriate fire extinguishers are to be mounted within 75 feet of outside areas containing flammable liquids, and within 10 feet of any inside storage area for such materials.
- Storage rooms for flammable and combustible liquids must have explosion-proof light fixtures.



- Bulk storage of gasoline or diesel are kept in above ground tanks. Tank areas are diked to contain accidental spills. Tanks shall be labelled. All tank areas shall be designated no smoking, no hot work and no open flame areas.
- No flames, hot work or smoking is be permitted in flammable or combustible liquid storage areas.
- The maximum amount of flammable liquids that may stored in a building are:
 - 20 gallons of Class IA liquids in containers
 - 100 gallons of Class IB, IC, II, or III liquids in containers
 - 500 gallons of Class IB, IC, II, or III liquids in a single portable tank.
- Flammable liquid transfer areas are to be separated from other operations by distance or by construction having proper fire resistance.
- When not in use flammable liquids shall be kept in covered containers.
- Class I liquids may be used only where there are no open flames or other sources of ignition within the possible path of vapour travel.
- Flammable or combustible liquids shall be drawn from or transferred into vessels, containers, or portable tanks within a building only through a closed piping system, from safety cans, by means of a device drawing through the top, or from a container or portable tanks by gravity through an approved self-closing valve. Transferring by means of air pressure on the container or portable tanks shall be prohibited.
- Maintenance and operating practices shall be in accordance with established procedures which will tend to control leakage and prevent the accidental escape of flammable or combustible liquids. Spills shall be cleaned up promptly.
- Combustible waste material and residues in a building or unit operating area shall be kept to a minimum, stored in covered metal receptacles and disposed of daily.
- Rooms in which flammable or combustible liquids are stored or handled by pumps shall have exit facilities arranged to prevent occupants from being trapped in the event of fire.
- Inside areas in which Class I liquids are stored or handled shall be heated only by means not constituting a source of ignition, such as steam, hot water or forces central systems located away from the area.

Cabinets

Not more than 120 gallons of Class I, Class II, and Class IIIA liquids may be stored in a storage cabinet. Of this total, not more than 60 gallons may be Class I and II liquids. Not more than three such cabinets (120 gallons each) may be located in a single fire area except in an industrial area.

Containers

The capacity of flammable and combustible liquid containers will be in accordance with the above table.

Maximum allowable capacity of containers and portable tanks:



Container	Flammable Liquids		Combustible Liquids		
	0.042	1B	1C	II	II
Glass or approved plastic	1pt2	1qt2	1gal	1gal	1gal
Metal (Other than DOT drums)	1gal	5gal	5gal	5gal	5gal
Safety Cans	5gal	5gal	5gal	5gal	5gal
Metal drums (DOT specifications)	60gal	60gal	60gal	60gal	60gal
Approved portable tanks	660gal	660gal	660gal	660gal	660gal
(1) Nearest metric size is also acceptable for the glass and plastic					
(2) One gallon or nearest metric equivalent size may be used if metal and labeled with their contents.					

Storage Inside Buildings

Where approved storage cabinets or rooms are not provided, inside storage will comply with the following basic conditions:

- The storage of any flammable or combustible liquid shall not physically obstruct a means of egress from the building or area.
- Containers of flammable or combustible liquids will remain tightly sealed except when transferred, poured or applied. Remove only that portion of liquid in the storage container required to accomplish a particular job.
- If a flammable and combustible liquid storage building is used, it will be a one-story building devoted principally to the handling and storing of flammable or combustible liquids. The building will have 2-hour fire-rated exterior walls having no opening within 10 feet of such storage.
- Flammable paints, oils, and varnishes in 1 or 5 gallon containers, used for building maintenance purposes, may be stored temporarily in closed containers outside approved storage cabinets or room if kept at the job site for less than 10 calendar days.

Designated Flammable Storage Areas are:

The designated flammable storage areas on site are to be indicated by our client.

8. Health Centre Safety

Purpose

A clinic with good housekeeping can reduce most hazards in the workplace. Clinic beds, desks and tables must be easily accessible, floor space and doorways should be clear and free of obstructions. Attention must be placed on floors and flat surfaces that have potential of accumulating dust and microbes. Readily available hand sanitized and washing facilities is also a must to ensure adequate hygiene practises.

Good ergonomic practices will assist the Health Centre staff strive in the remote camp atmosphere. Many workplace factors make physical and mental demands of the workers that affect health, mood, performance, safety and fatigue. Examples of such factors are job design, lighting, air quality and workstations. Reducing any source of fatigue helps workers deal with all of the demands of their work including the work schedule.

Responsibilities

Excellence in patient care at all levels is the primary goal of the staff of the Tactical Medical Service Health Centre.

The base of achieving this essential service is providing timely and effective care to the workers that require medical advice or treatment. We must do so in a safe environment.

Most of our Health Centre staff work alone in their workplaces. Back Injury Prevention techniques must be available and utilized to prevent a potentially debilitating musculoskeletal injury. These will include lifting techniques, proper planning, training and an organised work environment.

Medical supplies can be critical items in a remote job site. Clinic staff will maintain a good inventory and space must be reserved to store specialized items to meet Occupation Health and Safety regulations. Examples include items like medical Oxygen and chemicals.

Procedures

Clinic Office

- Health Centre Staff will ensure that the office space is organised
- Must be kept organised and free of waste and debris.
- Swept and cleaned daily and as needed.
- Washroom facilities should be cleaned daily.
- Hand sanitization supplies readily available and accessible.
- Refuge receptacles emptied on regular bases.
- Flat surfaces require sanitation weekly and as needed.



- Desk space should be kept clean and organised to evoke a professional atmosphere.

Vehicles

- The assigned vehicle will be appropriately maintained.
- Vehicles should be organised and free of waste and debris.
- Hand sanitization supplies readily available and accessible.
- Swept and cleaned regularly and as needed.
- Fuel must be adequate to respond to emergencies. Safety policies must be adhered to while refueling.
- Regular inspection of vehicle will identify any maintenance issues.

Ergonomics

- Organise office layout and supplies to ensure good ergonomic practises.
- Office chairs and equipment must be suitable and properly functioning.
- Lighting in clinic and work area must be adequate and in working order.
- Care and caution must be taken during vehicle operation to ensure safety of occupants.
- Wear seatbelts and secure patient to vehicle before transport.
- Fatigue increases the likelihood of being injured; ensure sufficient rest when working long periods.
- Protect from cold temperatures by wearing appropriate clothing and limit exposure time considering the outside wind chill factors.

Back Injury Prevention

- When moving or lifting patient or heavy objects assess, plan and implement the safest way for all those involved in the procedure.
- More efficient work flow can eliminate many potentially harmful lifting tasks.
- Do tasks without excessive bending and twisting, reduce stressful body movements
- Utilize good lifting techniques and preform stretch and flex before the move.
- Move things once to decrease the manual material handling demands.
- If eliminating heavy lifting tasks completely is not possible, consider using powered or mechanical handling systems to move large items.

Storage and Supply

Store Oxygen and other medical gases securely in appropriate devices depending on use. Bulk and unused tanks must be stored upright in a secure location to prevent accidental damage.



Maintain a supply of Sharps Containers available in the clinic and designated area. Containers in areas outside the Health Centre should be fastened to prevent unauthorized removal. Personal size containers should be recommended to workers needing such portable options at camp or in the workplace.

Organise storage areas to keep floors and doorways free of obstructions and to minimize tripping hazards.

Place small items on higher shelves and heavier on lower shelf or floor. Use carrying devices when possible.

Spill Cleanup

Store all liquids on sturdy shelves or surfaces.

- Cleaning chemicals should be stored in a separate area away from food and heat sources, in their original container and with a tight lid.
- Never mix chemicals. Know how to correctly use chemical products before using them. Use chemicals only in well ventilated areas.
- Follow WHMIS recommendations. Ensure the MSDS for any liquids are onsite and readily available.
- Read the MSDS of an item before handling or using it. Understanding the hazards involved and how to respond if a spill occurs.
- Contain spills and clean up them up as they occur or put up warning signs to caution others.

Fire Prevention

Follow these housekeeping rules to help prevent fires:

- Don't overload electrical outlets.
- Don't force three-pronged cords into two-prong outlets.
- Don't use equipment with a frayed cord or bent prongs.
- Don't use equipment that smokes, sparks or otherwise arouses suspicion.
- Avoid the use of flammable liquids in office area; the vapours can be explosive.
- Know the evacuation plan, what the fire alarm sounds like, how to turn on the fire alarm, where to find a fire extinguisher, and how to use it.

Please also refer to the other topics and sections detailed in the manual, as needed.



9. Housekeeping & Material Storage

Purpose

Attention to general cleanliness, storage and housekeeping can prevent numerous accidents. This chapter covers items not discussed in other areas and is not intended to cover all specific housekeeping requirements. Good housekeeping efforts are a part of Tactical Medical Service fire prevention and accident prevention program.

Management and Employee Responsibility

All Employees share the responsibility for maintaining good housekeeping practice and following the established housekeeping procedures. The Site Superintendent, Supervisors (i.e. Foreman), Safety Officer and Safety Committee will be responsible to monitor housekeeping as part of their facility safety inspection procedures, note any hazards or areas of non-compliance, initiate clean-up procedures and provide follow-up. Management has the additional responsibility to provide disciplinary action when necessary to reinforce compliance with this program.

Smoking Policy

Smoking is not permitted inside the dining room and/or within 10 feet of material storage. Smoking is permitted outside except near fuel storage areas (>10 meters). To prevent fires and keep the floors neat and orderly, all cigarette/cigar ashes and butts are to be disposed in the provided butt cans or ashtrays only.

Department and Area Housekeeping Procedures

Offices

Office areas are to be kept neat and orderly. The following general rules apply to prevent injuries and maintain a professional appearance.

- All aisles, emergency exits, fire extinguishers, etc., will be kept clear (a minimum of three feet of either side) of material storage (temporary and permanent) at all times.
- Storage areas will be maintained orderly at all times. When supplies are received, the supplies will be stored properly.
- Spills will be cleaned-up immediately and wastes disposed of properly.
- All waste receptacles will be lined with a plastic trash bag to avoid direct contact while handling. Custodial Employees will use rubber gloves and compaction bar when handling wastes.
- Keep file and desk drawers closed when not attended to avoid injuries. Open only one drawer at a time to prevent tipping of file cabinets.



- At the end of the business day, turn off all office equipment (lamps, PCs, etc.) and lights to save energy and prevent fires.

Working Areas

Working areas will be kept neat and orderly, during operations and as follows:

- All aisles, emergency exits, fire extinguishers, eye wash stations, etc., will be kept clear (a minimum of three feet in front of and to either side) of material storage at all times.
- Spills will be cleaned up immediately.
- All refuse and waste materials will be placed in the recognized waste containers for disposal.

Rest Rooms, Locker Rooms & Break Areas

Rest rooms, recreation rooms and cafeteria are provided for all Employees. The following rules will apply:

- Employees are expected to clean-up after themselves as a common courtesy to fellow Employees.
- Flammable materials (fire works, explosives, gasoline, etc.) may not stored in rest rooms, recreation rooms and cafeteria
- All waste receptacles will be lined with a plastic trash bag to avoid direct contact while handling and Custodial Employees will use rubber gloves and compaction bar when handling wastes.
- All refuse and waste materials will be placed in the recognized waste containers for disposal.

Maintenance Areas

- All aisles, emergency exits, fire extinguishers, etc., will be kept clear (a minimum of three feet of either side) of material storage (temporary and permanent) at all times.
- Storage Areas will be maintained orderly at all times:
 - *Pipe stock stored horizontally on racks and sorted by size*
 - *Metal stock stored horizontally on racks and sorted by size*
 - *Sheet metal stock stored vertically in racks and sorted by type*
 - *All fittings, etc., stored in bins on shelves and sorted by type and use*
 - *All flammables stored in Cabinets and self-closing cans where necessary*
- Spills will be cleaned-up immediately by the person responsible and wastes disposed properly.
- All refuse and waste materials will be placed in the recognized waste containers for disposal.



Material Storage

Proper storage procedures are required for dry, raw materials, finished product flammables and compressed gases storage to prevent fires, keep exits and aisles clear and avoid injuries and illnesses. General rules for material storage are as follows:

Materials and Finished Products Storage

- Materials may not be stored any closer than 18 inches to walls. A minimum of 3 feet side clearance will be maintained around doorways and emergency exits.
- Passageways and aisle will be properly marked and a minimum of six feet in width.
- Aisles and passageways will be kept clear of debris. All spills of materials will be immediately cleaned-up by the person responsible.
- All platforms and racks will have maximum load capacity displayed. The weight of stored material will not exceed the rated load capacity.

Flammable Storage

- All flammables will be stored in storage cabinets or shall be stored outside, in approved containers.
- Fuels, solvents and other flammables (not stored in original shipping containers) will be stored in self-closing containers with flame arresters. Flammables may not be stored in open containers (open parts baths, etc.).
- Flammable storage areas will be kept dry and well ventilated. No storage of combustible materials, open flames or exposed electrical components are permitted in the flammable storage area.
- Flammable or combustible materials may not be stored in electrical rooms. Electrical rooms must be kept clean and dry at all times.

Compressed Gas Storage Safety

- Inspect bottle for defects & proper marking/labels.
- Ensure stamped date on bottle has not expired.
- Inspect valve assembly and adapter thread area.
- Ensure MSDS is on file or with shipment.
- Follow MSDS requirements for storage.
- Cylinder cap securely in place when not in use.
- Marked with contents and if empty/full.
- Stored up-right and secured to a stationary structure in an shaded and well ventilated area.
- Cylinders not stored within 50 feet of exposed electrical components or combustible materials.
- Cylinders are protected from accidental rupture.
- Chemically reactive gases not stored within 50 feet of each other.



- Must be secured to a cart or cylinder trolley.
- Cap securely fastened.
- Inspect valve adapter threads.
- Inspect all fasteners, hoses & regulators prior to hooking up to cylinder.
- Use only for approved purposes.
- Use in up-right position.
- Fasten cylinder to structure or cart.
- Regulators must be of same rated pressure as cylinder.
- Keep cylinder valve shut when not in use; don't depend on regulators.

10. Kitchen Safety

General Kitchen Safety Rules

Food quality and fast service are often the main focus in a kitchen, but so it is safety.

A kitchen with good housekeeping can reduce slip and trip hazards. Stored materials should not obstruct pathways and exits. If liquids are spilled on the floor, they should be mopped up and a wet floor warning sign posted. Non-slip floor mats ensure that spills don't become slips.

Kitchen heat sources such as ovens, grills, range tops, deep fat fryers, and microwaves pose burn hazards. Using caution near hot surfaces, pots and pans, and utensils can prevent burns. Workers should avoid splashing water or drinks into hot oil or grease to prevent spattering. Cooking equipment and vents should be cooled before cleaning them; it is best to clean equipment at the start of a shift.

Other heat sources include boiling water, steam baths, sinks and dish washers. Reaching over boiling pots and hot water sources can lead to severe burns from steam. When opening pots or steam baths, workers should stand to the side and use the lid as a shield.

To prevent fires, workers should monitor cooking food carefully. Hot grease and oil should never be left unattended. Oils and grease should be cooled before transporting them. Grease traps and grill surfaces should be cleaned frequently, and flammable items should not be kept near flames or heat sources. It is important to know and practice emergency procedures, first aid, and how to use a fire extinguisher.

Comfortable, supportive shoes are essential for kitchen workers due to long periods of standing; footrests and anti-fatigue mats can also help; put one foot up to rest when possible. Moving and stretching frequently and rotating tasks can help workers avoid static postures and fatigue. To reduce overreaching, workers should keep their frequently used items closest to them and store seldom used items further away. Proper lifting techniques when moving heavy pots and food items can prevent strains.

Wearing close-fitting sleeves prevents catching them on pot handles, oven and stove knobs, or dangling them in flames or hot oil. Shoes should have cushioned insoles and slip-resistant soles. Aprons provide an added layer of protection from splashes of hot water or grease. Hand mitts and potholders should be used when handling hot items and hand protection such as mesh gloves may be worn when cutting and using sharp knives.



Food Handlers should use plenty of good detergent, soap, and hot water; keep your body and clothes clean; wash your hands before handling food and dishes; wash your hands after visiting the toilet.

Points to Remember for Increased Kitchen Safety

Burn Prevention

Provide training for all employees on recognizing and controlling burn hazards. Also, take these protective measures:

- Use dry hot pads when removing pans and kettles from the range or oven. Get help when handling large roasting pans and kettles.
- Keep pot handles turned away from burners and aisles.
- Turn off unused burners...save energy as well as eliminating possible burns.
- Avoid loose clothing when working around range or oven or machines. Keep sleeves buttoned.
- Avoid splashing water into the deep fryer. Always use basket, and submerge food slowly when using deep fryer.
- If you have to leave the area, make certain others know what is hot before you go.
- Keep an eye on fellow employees and warn them when they are in a danger area.
- When steam cleaning, wear proper protective clothing (rubber aprons, hand and foot protection).

Knife Handling

Take time to train new employees on proper knife handling.

- Keep knives sharp. Store properly. Don't let handle or blade extend into walking or working area when you put the knife down.
- Keep handles in good repair. Tighten or replace loose handles.
- Make certain your sharpening steel has a finger/hand guard. If it does not, get a new steel with a proper guard.
- Use the right knife for the right job! Cut AWAY from...not toward...your body.
- Only allow trained employees to operate electric slicers. All slicing machine guards should be kept in place and in good working condition.
- When slicing, stand to the side of the cut. Use fork for steadiness. Keep fingers in clear.
- Use cutting board or block when chopping or slicing to prevent slips and dulling.

Remember: Knives are not toys. Never "fence" or "duel" with **ANY KNIFE...EVER!**

Falls and Strains

Wipe up spills IMMEDIATELY. Remember, spilled or dropped food, grease, oil, water can be EXTREMELY SLIPPERY. "Caution" or "Wet Floor" signs should be posted until the floor is dry.



- Pick up items such as lettuce leaves, potato peeling, etc.
- Clean floors, and duckboards if provided, on a daily schedule.
- Keep aisles and passageways clear at all times.
- Repair holes and rough spots; provide ramps over potential obstructions on the floor. Remove tripping hazards such as cords and hoses, by storing them properly.
- Employees should never carry large loads that obstruct their vision.
- Encourage professional language when employees are moving through crowded areas. Phrases such as "behind you," "hot," "and "corner" help prevent collisions and falls.

Lifting

- Keep your back straight, bend your knees, and let the strong leg muscles do the lifting.
- Get help and/or use a cart or dolly to lift heavy or bulky objects.
- Store heavy cases or cartons on lower shelves, preferably at waist level, and place lighter items on high shelves.
- Always use the proper type of ladder to reach high objects. Make certain the ladder is in safe condition and that there are no broken rungs or defective side rails or braces.

Kitchen Machines

Make sure you know what you are doing before operating any machine.

If you do not know how it operates, get instructions! Here are some other suggestions, which can help you use these labour-saving devices with safety.

- Be certain all machines are properly grounded electrically. If you get a "tingle", **shut down the machine and report it immediately!**
- Keep guards in place when machine is operating. Replace all guards which have been removed for cleaning, adjustment or repairs.
- Keep hands and fingers out of all machines. Do not attempt to repair or adjust any machine until it has been turned off and the power supply is disconnected.
- Use a brush to clear crumbs, scraps and other materials when cleaning any machine.



- SLICERS: "Zero" the blade after each use. When wiping blade, wipe from center hub to edge, to prevent slashing injury from edge of blade.
- MIXERS: Make certain beaters are properly fastened, and bowl elevator is locked in position before starting the unit.
- Stop the machine before attempting to remove anything from the mixing bowl... without exception.
- GRINDERS, TENDERIZERS: Use push stick to feed grinder. Never place fingers in feed openings. Keep guards in place on these and all machines at all times when operating.
- COFFEE URNS, PRESSURE COOKERS: make a daily check of the safety valves to insure they are unplugged and in operating condition. Be certain nothing is obstructing the pressure gauge opening, or the opening to the safety plug.
- DISHWASHERS: Load trays properly. Don't overload. Don't force into the machine; use gentle pressure. If tray is stuck in unit, use long pole with hook to pull back to leading end. Wear rubber gloves to avoid contact with harsh soaps and caustics.

Fire Prevention

Follow these housekeeping rules to help prevent kitchen fires:

- Make certain pilot lights on ovens, water heaters, stoves, and other appliances are properly adjusted, and that burners light immediately when burner valves are opened.
- Never leave dish rags or aprons near a hot surface.
- Never leave stoves or other equipment unattended when in use.
- Clean range hoods and stoves on schedule to help reduce build-up.
- Don't overload electrical outlets.
- Don't force three-pronged cords into two-prong outlets.
- Don't use equipment with a frayed cord or bent prongs.
- Don't use equipment that smokes, sparks or otherwise arouses suspicion.
- Avoid the use of flammable liquids in kitchen area; the vapours can be explosive.
- Know the evacuation plan, what the fire alarm sounds like, how to turn on the fire alarm, where to find a fire extinguisher, and how to use it.

Safe Handling of Chemicals

Cleaning chemicals should be stored in a separate area away from food and heat sources, in their original container and with a tight lid.

- Never mix chemicals.
- Know how to correctly use chemical products before using them.
- Use chemicals only in well ventilated areas.
- Follow label directions when disposing of chemical containers.
- Wash hands after using or touching any chemical or equipment used with a chemical.

Please also refer to the other topics and sections detailed in the manual, as needed.



Dermatitis Prevention

Some individuals are susceptible to dermatitis caused by soaps, dishwashing & cleaning products, and prolonged contact with water; that is, an inflammation of the skin caused by above materials usually to hands, arms, or neck.

To help prevent dermatitis, those who have the tendency should wear gloves, long sleeves, and keep the top button of their shirt buttoned while working.

Moisturise your hands to replenish the skin's natural oils and check your hands regularly for the early stages of dermatitis, i.e. itchy, dry or red skin. These symptoms should be reported to the supervisor and the medical personnel on site, as treatment is much more effective if dermatitis is caught early.

11. Personal Protective Equipment

Purpose

Tactical Medical Service will provide all Employees with required Personal Protective Equipment (PPE) to suit the task and known hazards. This chapter covers the requirements for Personal Protective Equipment with the exception of PPE used for respiratory protection or PPE required for hazardous material response to spills or releases.

General Rules

Design

All personal protective equipment shall be of safe design and construction for the work to be performed.

Hazard assessment and equipment selection

Hazard analysis procedures shall be used to assess the workplace to determine if hazards are present, or are likely to be present, which would necessitate the use of personal protective equipment (PPE). If such hazards are present, or likely to be present, the following actions will be taken:

- Select, and have each affected Employee use, the proper PPE
- Communicate selection decisions to each affected Employee
- Select PPE that properly fits each affected employee.

Defective and damaged equipment

Defective or damaged personal protective equipment shall not be used.

Training

All Employees who are required to use PPE shall be trained to know at least the following:

- When PPE is necessary;
- What PPE is necessary;
- How to properly don, remove, adjust, and wear PPE;
- The limitations of the PPE
- The proper care, maintenance, useful life and disposal of the PPE.

Each affected Employee shall demonstrate an understanding of the training and the ability to use PPE properly, before being allowed to perform work requiring the use of PPE.



Minimum PPE Requirements

All workers working outside of the camp will be required to wear or have available at all times the following PPE:

Eye and face protection:	Safety goggles
Head protection:	Class A helmet
Foot protection: protection	Safety boots with impact, compression and puncture
Hand protection:	Safety gloves, adapted to intended application
Visibility:	High-visibility vest or coverall

Personal Protective Equipment Selection

Controlling hazards

Apart from the minimum requirements prescribed as a general rule, more specific PPE could be necessary, depending on the nature of the work performed by a worker. The following section will state selection guidelines that will enable workers to properly select PPE, according to the work they will perform.

PPE devices alone should not be relied on to provide protection against hazards, but should be used in conjunction with guards, engineering controls, and sound manufacturing practices.

Selection guidelines

The general procedure for selection of protective equipment is to:

- Become familiar with the potential hazards and the type of protective equipment that is available, and what it can do; i.e., splash protection, impact protection, etc.;
- Compare the hazards associated with the environment; i.e., impact velocities, masses, projectile shape, radiation intensities, with the capabilities of the available protective equipment;
- Select the protective equipment which ensures a level of protection greater than the minimum required to protect employees from the hazards
- Fit the user with the protective device and give instructions on care and use of the PPE. It is very important that end users be made aware of all warning labels for and limitations of their PPE.

Fitting the Device



Careful consideration must be given to comfort and fit. PPE that fits poorly will not afford the necessary protection. Continued wearing of the device is more likely if it fits the wearer comfortably. Protective devices are generally available in a variety of sizes. Care should be taken to ensure that the right size is selected.

Devices with adjustable features

Adjustments should be made on an individual basis for a comfortable fit that will maintain the protective device in the proper position. Particular care should be taken in fitting devices for eye protection against dust and chemical splash to ensure that the devices are sealed to the face. In addition, proper fitting of helmets is important to ensure that it will not fall off during work operations. In some cases, a chin strap may be necessary to keep the helmet on an employee's head. (Chin straps should break at a reasonably low force, however, so as to prevent a strangulation hazard). Where manufacturer's instructions are available, they should be followed carefully.

Eye and Face Protection

Each affected employee shall use appropriate eye or face protection when exposed to eye or face hazards from flying particles, molten metal, liquid chemicals, acids or caustic liquids, chemical gases or vapors, or potentially injurious light radiation. Each affected employee shall use eye protection that provides side protection when there is a hazard from flying objects. Detachable side protectors are acceptable. Each affected employee who wears prescription lenses while engaged in operations that involve eye hazards shall wear eye protection that incorporates the prescription in its design, or shall wear eye protection that can be worn over the prescription lenses without disturbing the proper position of the prescription lenses or the protective lenses. Eye and face PPE shall be distinctly marked to facilitate identification of the manufacturer. Each affected employee shall use equipment with filter lenses that have a shade number appropriate for the work being performed for protection from injurious light radiation. The following is a listing of appropriate shade numbers for various operations.

Filter Lenses for Protection Against Radiant Energy			
Operations	Electrode Size 1/32 in	Arc Current	Protective Shade
Shielded metal arc welding	Less than 3	Less than 60	7
	3-5	60-160	8
	5-8	160-250	10
	More than 8	250-550	11
Torch brazing			3
Torch soldering			2

Selection chart guidelines for eye and face protection

The following chart provides general guidance for the proper selection of eye and face protection to protect against hazards associated with the listed hazard "source" operations.

Note: as a rule of thumb, start with a shade that is too dark to see the weld zone. Then go to a lighter shade which gives sufficient view of the weld zone without going below the minimum. In oxyfuel gas welding or cutting where the torch produces a high yellow light, it is desirable to use a filter lens that absorbs the yellow or sodium line in the visible light of the (spectrum) operation.

Source	Hazard	Protection
IMPACT - Chipping, grinding machining, masonry work, woodworking, sawing, drilling, chiseling, powered fastening, riveting, and sanding	Flying fragments, objects, large chips, particles, sand, dirt, etc.	Spectacles with side protection, goggles, face shield For severe exposure, use face shield
HEAT-Furnace operation and arc welding	Hot sparks	Face shields, spectacles with side. For severe exposure use face shield.
CHEMICALS-Acid and chemical handling, degreasing, plating	Splash	Goggles, eyecup and cover types. For severe exposure, use face shield.
DUST - Woodworking, buffing, general buffing, general dusty conditions.	Nuisance dust	Goggles, eye cup and cover type

Selection Guidelines for Head Protection

All head protection is designed to provide protection from impact and penetration hazards caused by falling objects. Head protection is also available which provides protection from electric shock and burn. When selecting head protection, knowledge of potential electrical hazards is important. Class A helmets, in addition to impact and penetration resistance, provide electrical protection from low-voltage conductors (they are proof tested to 2,200 volts). Class B helmets, in addition to impact and penetration resistance, provide electrical protection from high-voltage conductors (they are proof tested to 20,000 volts). Class C helmets provide impact and penetration resistance (they



are usually made of aluminum which conducts electricity) and should not be used around electrical hazards. Where falling object hazards are present, helmets must be worn. Some examples include: working below other workers who are using tools and materials which could fall; working around or under conveyor belts which are carrying parts or materials; working below machinery or processes which might cause material or objects to fall; and working on exposed energized conductors.

Foot Protection

General requirements

Each affected employee shall wear protective footwear when working in areas where there is a danger of foot injuries due to falling or rolling objects, objects piercing the sole, and where employee's feet are exposed to electrical hazards.

Selection guidelines for foot protection.

Safety shoes and boots provide both impact and compression protection. Where necessary, safety shoes can be obtained which provide puncture protection. In some work situations, metatarsal protection should be provided, and in other special situations electrically conductive or insulating safety shoes would be appropriate. Safety shoes or boots with impact protection would be required for carrying or handling materials such as packages, objects, parts or heavy tools, which could be dropped; and for other activities where objects might fall onto the feet. Safety shoes or boots with compression protection would be required for work activities involving skid trucks (manual material handling carts), around bulk rolls (such as paper rolls), and around heavy pipes, all of which could potentially roll over an employee's feet. Safety shoes or boots with puncture protection would be required where sharp objects such as nails, wire, tacks, screws, large staples, scrap metal etc., could be stepped on by employees causing a foot injury.

Hand Protection

General requirements

Hand protection is required when employees' hands are exposed to hazards such as those from skin absorption of harmful substances; severe cuts or lacerations; severe abrasions; punctures; chemical burns; thermal burns; and harmful temperature extremes.

Selection guidelines for hand protection

Selection of hand PPE shall be based on an evaluation of the performance characteristics of the hand protection relative to the task(s) to be performed, conditions present, duration of use, the hazards and potential hazards identified. Gloves are often relied upon to prevent cuts, abrasions, burns, and skin contact with chemicals that are capable of causing local or systemic effects following dermal exposure. There is no glove that provides protection against all potential hand hazards, and commonly available glove materials provide only limited protection against many chemicals. Therefore, it is important to select the most appropriate glove for a particular application and to determine how long it can be worn, and whether it can be reused. It is also important to



know the performance characteristics of gloves relative to the specific hazard anticipated; e.g., chemical hazards, cut hazards, flame hazards, etc. Before purchasing gloves, request documentation from the manufacturer that the gloves meet the appropriate test standard(s) for the hazard(s) anticipated. Other factors to be considered for glove selection in general include:

- A. As long as the performance characteristics are acceptable, in certain circumstances, it may be more cost effective to regularly change cheaper gloves than to reuse more expensive types.
- B. The work activities of the employee should be studied to determine the degree of dexterity required, the duration, frequency, and degree of exposure of the hazard, and the physical stresses that will be applied.

Selection of gloves for protection against chemical hazards

- A. The toxic properties of the chemical(s) must be determined; in particular, the ability of the chemical to cause local effects on the skin and/or to pass through the skin and cause systemic effects.
- B. Generally, any "chemical resistant" glove can be used for dry powders.
- C. For mixtures and formulated products (unless specific test data are available), a glove should be selected on the basis of the chemical component with the shortest break through time, since it is possible for solvents to carry active ingredients through polymeric materials.
- D. Employees must be able to remove the gloves in such a manner as to prevent skin contamination.

Hearing Protection

Employees subjected to excessive noise levels shall be provided with and shall wear hearing protection devices in accordance with the standards set out by the Industrial Health and Safety Regulations.

Visibility

General requirements

Hi-visibility clothing is required when employees are exposed to hazards such as those from vehicles and heavy equipment.



Selection guidelines for hi-visibility clothing

High visibility clothing provides protection from moving vehicles and heavy equipment by maximizing the workers' visibility, therefore minimizing the risks of a collision. Where necessary, hi-visibility vests and coveralls will be made available to all workers.

12. Respiratory Protection

Purpose

In the Respiratory Protection Program, hazard assessment and selection of proper respiratory PPE is conducted in the same manner as for other types of PPE. In the control of those occupational diseases caused by breathing air contaminated with harmful dusts, fogs, fumes, mists, gases, smokes, sprays, or vapors, the primary objective shall be to prevent atmospheric contamination. This shall be accomplished as far as feasible by accepted engineering control measures (for example, enclosure or confinement of the operation, general and local ventilation, and substitution with less toxic materials). When effective engineering controls are not feasible, or while they are being instituted, appropriate respirators shall be used.

Responsibilities

All Employees shall follow the requirements of the Respiratory Protection Program.

Management

- implement the requirements of this program
- provide a selection of respirators as required
- enforce all provisions of this program
- appoint a Specific Designated individual to conduct the respiratory protection program

Safety Officer

- review sanitation/storage procedures.
- ensure respirators are properly stored, inspected and maintained
- monitor compliance for this program
- provide training for affected Employees
- review compliance and ensure monthly inspection of all respirators
- provide respirator fit testing

Safety Officer

A Safety Officer who is qualified by appropriate training or experience that is commensurate with the complexity of the program to administer or oversee the respiratory protection program and conduct the required evaluations of program effectiveness will be designated.

Program Evaluation



Evaluations of the workplace are necessary to ensure that the written respiratory protection program is being properly implemented; this includes consulting with employees to ensure that they are using the respirators properly. Evaluations shall be conducted as necessary to ensure that the provisions of the current written program are being effectively implemented and that it continues to be effective. Program evaluation will include discussions with employees required to use respirators to assess the employees' views on program effectiveness and to identify any problems. Any problems that are identified during this assessment shall be corrected. Factors to be assessed include, but are not limited to:

- Respirator fit (including the ability to use the respirator without interfering with effective workplace performance);
- Appropriate respirator selection for the hazards to which the employee is exposed;
- Proper respirator use under the workplace conditions the employee encounters; and
- Proper respirator maintenance.

Record Keeping

Tactical Medical Service will retain written information regarding medical evaluations, fit testing, and the respirator program. This information will facilitate employee involvement in the respirator program, assist Tactical Medical Service in auditing the adequacy of the program, and provide a record for compliance determinations.

Training and Information

Effective training for employees who are required to use respirators is essential. The training must be comprehensive, understandable, and recur annually, or more often if necessary. Training will be provided prior to requiring the employee to use a respirator in the workplace. The training shall ensure that each employee can demonstrate knowledge of at least the following:

- Why the respirator is necessary and how improper fit, usage, or maintenance can compromise the protective effect of the respirator
- Limitations and capabilities of the respirator
- How to use the respirator effectively in emergency situations, including situations in which the respirator malfunctions
- How to inspect, put on and remove, use, and check the seals of the respirator
- What the procedures are for maintenance and storage of the respirator
- How to recognize medical signs and symptoms that may limit or prevent the effective use of respirators
- The general requirements of this program

Retraining shall be conducted annually and when:

- changes in the workplace or the type of respirator render previous training obsolete.



- inadequacies in the employee's knowledge or use of the respirator indicate that the employee has not retained the requisite understanding or skill.
- other situation arises in which retraining appears necessary to ensure safe respirator use.

Training will be conducted by the site Safety Officer. Training is divided into the following sections:

Classroom Instruction

- Overview of Respiratory Protection Program & OSHA Standard
- Respiratory Protection Safety Procedures
- Respirator Selection
- Respirator Operation and Use
- Why the respirator is necessary
- How improper fit, usage, or maintenance can compromise the protective effect.
- Limitations and capabilities of the respirator.
- How to use the respirator effectively in emergency situations, including respirator malfunctions
- How to inspect, put on and remove, use, and check the seals of the respirator.
- What the procedures are for maintenance and storage of the respirator.
- How to recognize medical signs and symptoms that may limit or prevent the effective use of
respirators.
- Change out schedule and procedure for air purifying respirators.

Fit Testing

- Hands-on respirator Training
- Respirator Inspection
- Respirator cleaning and sanitizing
- Record Keeping
- Respirator Storage
- Respirator Fit Check
- Emergencies

Basic Respiratory Protection Safety Procedures

- Only authorized and trained Employees may use Respirators. Those Employees may use only the Respirator that they have been trained on and properly fitted to use.



- Only Physically Qualified Employees may be trained and authorized to use Respirators. A pre-authorization and annual certification by a qualified physician will be required and maintained. Any changes in an Employees health or physical characteristics will be reported to the Safety Officer and will be evaluated by a qualified physician.
- Only the proper prescribed respirator or Self-Contained Breathing Apparatus (SCBA) may be used for the job or work environment. Air cleansing respirators may be worn in work environments when oxygen levels are between 19.5 percent to 23.5 percent and when the appropriate air cleansing canister, as determined by the Manufacturer and approved by NIOSH or MESA, for the known hazardous substance is used. SCBAs will be worn in oxygen deficient and oxygen rich environments (below 19.5 percent or above 23.5 percent oxygen).
- Employees working in environments where a sudden release of a hazardous substance is likely will wear an appropriate respirator for that hazardous substance (example: organic vapor respirator for handling PCB liquid).
- Only SCBAs will be used in oxygen deficient environments, environments with an unknown hazardous substance or unknown quantity of a known hazardous substance or any environment that is determined "Immediately Dangerous to Life or Health" (IDLH).
- Employees with respirators loaned on "permanent check out" will be responsible for the sanitation, proper storage and security. Respirators damaged by normal wear will be repaired or replaced by TMS when returned.
- The last Employee using a respirator and/or SCBA that are available for general use will be responsible for proper storage and sanitation. Monthly, and after each use, all respirators will be inspected with documentation to assure its availability for use.
- All respirators will be located in a clean, convenient and sanitary location.
- In the event that Employees must enter a confined space, work in environments with hazardous substances that would be dangerous to life or health should an Respiratory Protective Equipment (RPE) fail (a SCBA is required in this environment), and/or conduct a HAZMAT entry, a "buddy system" detail will be used with a Safety Watchman with constant voice, visual or signal line communication. Employees will follow the established Emergency Response Program and/or Confined Space Entry Program when applicable.
- Management will establish and maintain surveillance of jobs and work place conditions and degree of Employee exposure or stress to maintain the proper procedures and to provide the necessary RPE.
- Management will establish and maintain safe operation procedures for the safe use of RPE with strict enforcement and disciplinary action for failure to follow all general and specific safety rules. Standard Operation Procedures for General RPE use will be maintained as an attachment to the Respiratory Protection Program and Standard Operation Procedures for RPE use under emergency response situations will be maintained as an attachment to the Emergency Response Program.

Selection of Respirators

Tactical Medical Service has evaluated the respiratory hazard(s) in contaminated soil areas, identified relevant workplace and user factors and has based respirator selection on these factors. Also included are estimates of employee exposures to respiratory hazard(s) and an identification of the contaminant's chemical state and physical form. This selection has included appropriate



protective respirators for use in IDLH atmospheres and has limited the selection and use of air-purifying respirators. All selected respirators are NIOSH-certified.

Filter Classifications

These classifications are marked on the filter or filter package.

N-Series: Not Oil Resistant

Approved for non-oil particulate contaminants

Examples: dust, fumes, mists not containing oil

R-Series: Oil Resistant

Approved for all particulate contaminants, including those containing oil

Examples: dusts, mists, fumes

Time restriction of 8 hours when oils are present

P-Series: Oil Proof

Approved for all particulate contaminants including those containing oil

Examples: dust, fumes, mists

See Manufacturer's time use restrictions on packaging

Respirators for IDLH atmospheres

The following respirators will be used in IDLH atmospheres:

- A full face piece pressure demand SCBA certified by NIOSH for a minimum service life of thirty minutes, or
- A combination full face piece pressure demand supplied-air respirator (SAR) with auxiliary self-contained air supply.
- Respirators provided only for escape from IDLH atmospheres shall be NIOSH-certified for escape from the atmosphere in which they will be used.

Respirators for atmospheres that are not IDLH

The respirators selected shall be adequate to protect the health of the employee and ensure compliance with all other OSHA statutory and regulatory requirements, under routine and reasonably foreseeable emergency situations. The respirator selected shall be appropriate for the chemical state and physical form of the contaminant.

Identification of Filters & Cartridges



All filters and cartridges shall be labelled, and color coded with the NIOSH approval label. Only filters and cartridges on which the label is not removed and remains legible may be used. A change out schedule for filters and canisters has been developed to ensure these elements of the respirators remain effective.

Respirator Filter & Canister Replacement

An important part of the Respiratory Protection Program includes identifying the useful life of canisters and filters used on air-purifying respirators. Each filter and canister shall be equipped with an end-of-service-life indicator (ESLI) certified by NIOSH for the contaminant; or If there is no ESLI appropriate for conditions a change schedule for canisters and cartridges that is based on objective information or data that will ensure that canisters and cartridges are changed before the end of their service life.

Filter & Cartridge Change Schedule

A stock of spare filters and cartridges shall be maintained to allow immediate change when required or desired by the employee. Cartridges shall be changed based on the most limiting factor below:

- Prior to expiration date
- Manufactures recommendations for the specific use and environment
- After each use
- When requested by employee
- When contaminate odor is detected
- When restriction to air flow has occurred as evidenced by increase effort by user to breathe normally
- Cartridges shall remain in their original sealed packages until needed for immediate use
- Filters shall be changed on the most limiting factor below:
 - Prior to expiration date
 - Manufactures recommendations for the specific use and environment
 - When requested by employee
 - When contaminate odor is detected
 - When restriction to air flow has occurred as evidenced by increase effort by user to breathe normally
 - When discoloring of the filter media is evident
 - Filters shall remain in their original sealed package until needed for immediate use.

Respiratory Protection Schedule by Job and Working Condition

The Health and Safety Officer maintains a Respiratory Protection Schedule by Job and Working Condition. This schedule is provided to each authorized and trained Employee. The Schedule provides the following information:



- 1. Job/Working Conditions
- 2. Work Location
- 3. Hazards Present
- 4. Type of Respirator or SCBA Required
- 5. Type of Filter/Canister Required
- 6. Location of Respirator or SCBA
- 7. Filter/Cartridge change out schedule

The schedule will be reviewed and updated at least annually and whenever any changes are made in the work environments, machinery, equipment, or processes or if different respirator models are introduced, or existing models are removed. Permanent respirator schedule assignments are: Each person who engages in welding will have their own dust-mist-fume filter APR. This respirator shall be worn during all welding operations.

Physical and Medical Qualifications

Records of medical evaluations shall be retained and made available. Using a respirator may place a physiological burden on employees that varies with the type of respirator worn, the job and workplace conditions in which the respirator is used, and the medical status of the employee.

Medical Determination

In determining the employee's ability to use a respirator, Tactical Medical Service may obtain a written recommendation regarding the employee's ability to use the respirator from the Physician. The recommendation shall provide only the following information:

- Any limitations on respirator use related to the medical condition of the employee, or relating to the workplace conditions in which the respirator will be used, including whether or not the employee is medically able to use the respirator.
- The need, if any, for follow-up medical evaluations
- A statement that the Physician has provided the employee with a copy of the Physician's written recommendation

If the respirator is a negative pressure respirator and the Physician finds a medical condition that may place the employee's health at increased risk if the respirator is used, the Corporation shall provide a APR if the Physician's medical evaluation finds that the employee can use such a respirator; if a subsequent medical evaluation finds that the employee is medically able to use a negative pressure respirator, then the Corporation is no longer required to provide a APR

Additional Medical Evaluations

Tactical Medical Service may provide additional medical evaluations that comply with the requirements of this section if:



- An employee reports medical signs or symptoms that are related to ability to use a respirator
- A Physician, supervisor, or the Safety Officer informs the Corporation that an employee needs to be reevaluated
- Information from the respiratory protection program, including observations made during fit testing and program evaluation, indicates a need for employee reevaluation
- A change occurs in workplace conditions (e.g., physical work effort, protective clothing, temperature) that may result in a substantial increase in the physiological burden placed on an employee.

Respirator Fit Testing

Before an employee is required to use any respirator with a negative or positive pressure tight-fitting face piece, the employee must be fit tested with the same make, model, style, and size of respirator that will be used. The Safety Officer shall ensure that an employee using a tight-fitting face piece respirator is fit tested prior to initial use of the respirator, whenever a different respirator face piece (size, style, model or make) is used, and at least annually thereafter. The Safety Officer shall establish a record of the qualitative and quantitative fit tests administered to employees including:

- The name or identification of the employee tested
- Type of fit test performed
- Specific make, model, style, and size of respirator tested
- Date of test
- The pass/fail results for “Qualitative Fitness Tests” (QLFTs) or the fit factor and strip chart recording or other recording of the test results for “Quantitative Fitness Tests” (QNFTs)

Additional fit tests will be conducted whenever the employee reports, or the supervisor, or Safety Officer makes visual observations of, changes in the employee's physical condition that could affect respirator fit. Such conditions include, but are not limited to, facial scarring, dental changes, cosmetic surgery, or an obvious change in body weight. If after passing a QLFT or QNFT, the employee notifies the Safety Officer that the fit of the respirator is unacceptable, the employee shall be given a reasonable opportunity to select a different respirator face piece and to be retested.

Types of Fit Tests

The fit test shall be administered using an accepted protocols and procedures.

- QLFT may only be used to fit test negative pressure air-purifying respirators that must achieve a fit factor of 100 or less.



- If the fit factor, as determined through an accepted QNFT protocol, is equal to or greater than 100 for tight-fitting half face pieces, or equal to or greater than 500 for tight-fitting full face pieces, the QNFT has been passed with that respirator.
- Fit testing of tight-fitting atmosphere-supplying respirators and tight-fitting powered air-purifying respirators shall be accomplished by performing quantitative or qualitative fit testing in the negative pressure mode, regardless of the mode of operation (negative or positive pressure) that is used for respiratory protection.
- Qualitative fit testing of these respirators shall be accomplished by temporarily converting the respirator user's actual face piece into a negative pressure respirator with appropriate filters, or by using an identical negative pressure air-purifying respirator face piece with the same sealing surfaces as a surrogate for the atmosphere-supplying or powered air-purifying respirator face piece.
- Quantitative fit testing of these respirators shall be accomplished by modifying the face piece to allow sampling inside the face piece in the breathing zone of the user, midway between the nose and mouth. This requirement shall be accomplished by installing a permanent sampling probe onto a surrogate face piece, or by using a sampling adapter designed to temporarily provide a means of sampling air from inside the face piece.
- Any modifications to the respirator face piece for fit testing shall be completely removed, and the face piece restored to NIOSH approved configuration, before that face piece can be used in the workplace.

Fit test records shall be retained for respirator users until the next fit test is administered. Written materials required to be retained shall be made available upon request to affected employees.

Respirator Operation and Use

Respirators will only be used following the respiratory protection safety procedures established in this program. The Operations and Use Manuals for each type of respirator will be maintained by the Safety Officer and be available to all qualified users. Surveillance by the direct supervisor shall be maintained of the work area conditions and the degree of employee exposure or stress. When there is a change in work area conditions or degree of employee exposure or stress that may affect respirator effectiveness, the Safety Officer may reevaluate the continued effectiveness of the respirator. For continued protection of respirator users, the following general use rules apply:

- Users shall not remove respirators while in a hazardous environment
- Respirators are to be stored in sealed containers out of harmful atmospheres
- Store respirators away from heat and moisture
- Store respirators such that the sealing area does not become distorted or warped
- Store respirator such that the face piece is protected



Face piece seal protection

Tactical Medical Service does not permit respirators with tight-fitting face pieces to be worn by employees who have:

- Facial hair that comes between the sealing surface of the face piece and the face or that interferes with valve function; or
- Any condition that interferes with the face-to-face piece seal or valve function. If an employee wears corrective glasses or goggles or other personal protective equipment, the Safety Officer shall ensure that such equipment is worn in a manner that does not interfere with the seal of the face piece to the face of the user.

Continuing Effectiveness of Respirators

The Safety Officer shall ensure that employees leave the respirator use area:

- To wash their faces and respirator face pieces as necessary to prevent eye or skin irritation associated with respirator use
- If they detect vapor or gas breakthrough, changes in breathing resistance, or leakage of the face piece
- To replace the respirator or the filter, cartridge, or canister elements.

If the employee detects vapor or gas breakthrough, changes in breathing resistance, or leakage of the face piece, the Safety Officer will replace or repair the respirator before allowing the employee to return to the work area.

Procedures for IDLH atmospheres

For all IDLH atmospheres, TMS shall ensure that:

- One employee or, when needed, more than one employee is located outside the IDLH atmosphere
- Visual, voice, or signal line communication is maintained between the employee(s) in the IDLH atmosphere and the employee(s) located outside the IDLH atmosphere
- The employee(s) located outside the IDLH atmosphere are trained and equipped to provide effective emergency rescue
- The Site Emergency Medical Technician and Safety Officer are notified before the employee(s) located outside the IDLH atmosphere enter the IDLH atmosphere to provide emergency rescue



- The Emergency Medical Technician and/or Safety Officer, once notified, provides necessary assistance appropriate to the situation
- Employee(s) located outside the IDLH atmospheres will be equipped with:
- Pressure demand or other positive pressure SCBAs, or a pressure demand or other positive pressure supplied-air respirator with auxiliary SCBA; and either
- Appropriate retrieval equipment for removing the employee(s) who enter(s) these hazardous atmospheres where retrieval equipment would contribute to the rescue of the employee(s) and would not increase the overall risk resulting from entry; or
- Equivalent means for rescue where retrieval equipment is not required.

Cleaning and Disinfecting

Tactical Medical Service shall provide each respirator user with a respirator that is clean, sanitary, and in good working order. The Safety Officer shall ensure that respirators are cleaned and disinfected using the Standard Operating Procedure SOP: Cleaning and Disinfecting.

The respirators shall be cleaned and disinfected when:

- Respirators issued for the exclusive use of an employee shall be cleaned and disinfected as often as necessary to be maintained in a sanitary condition
- Respirators issued to more than one employee shall be cleaned and disinfected before being worn by different individuals
- Respirators maintained for emergency use shall be cleaned and disinfected after each use
- Respirators used in fit testing and training shall be cleaned and disinfected after each use.

Cleaning and Storage of respirators assigned to specific employees is the responsibility of that Employee unless notified otherwise.

Respirator Inspection

All respirators/SCBAs, both available for "General Use" and those on "Permanent Check-out", will be inspected after each use and at least monthly. Should any defects be noted, the respirator/SCBA will be taken to the Safety Officer. Damaged Respirators will be either repaired or replaced. The inspection of respirators loaned on "Permanent Check-out" is the responsibility of that trained Employee. Respirators shall be inspected as follows:

- All respirators used in routine situations shall be inspected before each use and during cleaning
- All respirators maintained for use in emergency situations shall be inspected at least monthly and in accordance with the manufacturer's recommendations, and shall be checked for proper function before and after each use



- Emergency escape-only respirators shall be inspected before being carried into the workplace for use

Respirator inspections include the following:

- A check of respirator function, tightness of connections, and the condition of the various parts including, but not limited to, the face piece, head straps, valves, connecting tube, and cartridges, canisters or filters
- Check of elastomeric parts for pliability and signs of deterioration.
- Self-contained breathing apparatus shall be inspected monthly. Air and oxygen cylinders shall be maintained in a fully charged state and shall be recharged when the pressure falls to 90% of the manufacturer's recommended pressure level. QM shall determine that the regulator and warning devices function properly

For Emergency Use Respirators the additional requirements apply:

- Certify the respirator by documenting the date the inspection was performed, the name (or signature) of the person who made the inspection, the findings, required remedial action, and a serial number or other means of identifying the inspected respirator.
- Provide this information on a tag or label that is attached to the storage compartment for the respirator, is kept with the respirator, or is included in inspection reports stored as paper or electronic files. This information shall be maintained until replaced following a subsequent certification.

Respirator Storage

Respirators are to be stored as follows:

- All respirators shall be stored to protect them from damage, contamination, dust, sunlight, extreme temperatures, excessive moisture, and damaging chemicals, and they shall be packed or stored to prevent deformation of the face piece and exhalation valve.
- Emergency Respirators shall be:
 - *Kept accessible to the work area;*
 - *Stored in compartments or in covers that are clearly marked as containing emergency respirators; and*
 - *Stored in accordance with any applicable manufacturer instructions.*



Repair of Respirators

Respirators that fail an inspection or are otherwise found to be defective will be removed from service to be discarded, repaired or adjusted in accordance with the following procedures:

- Repairs or adjustments to respirators are to be made only by persons appropriately trained to perform such operations and shall use only the respirator manufacturer's NIOSH-approved parts designed for the respirator;
- Repairs shall be made according to the manufacturer's recommendations and specifications for the type and extent of repairs to be performed; and
- Reducing and admission valves, regulators, and alarms shall be adjusted or repaired only by the manufacturer or a technician trained by the manufacturer.

Breathing Air Quality and Use

Tactical Medical Service through its Safety Officer shall ensure that compressed air, compressed oxygen, liquid air, and liquid oxygen used for respiration accords with the following specifications:

- Compressed and liquid oxygen shall meet the United States Pharmacopoeia requirements for medical or breathing oxygen; and
- Compressed breathing air shall meet at least the requirements for Grade D breathing air described in ANSI/Compressed Gas Association Commodity Specification for Air, G-7.1-1989, to include:
 - *Oxygen content (v/v) of 19.5-23.5%;*
 - *Hydrocarbon (condensed) content of 5 milligrams per cubic meter of air or less;*
 - *Carbon monoxide (CO) content of 10 ppm or less;*
 - *Carbon dioxide content of 1,000 ppm or less; and*
 - *Lack of noticeable odor.*
- Compressed oxygen will not be used in atmosphere-supplying respirators that have previously used compressed air
- Oxygen concentrations greater than 23.5% are used only in equipment designed for oxygen service or distribution
- Cylinders used to supply breathing air to respirators meet the following requirements
- Cylinders of purchased breathing air have a certificate of analysis from the supplier that the breathing air meets the requirements for Grade D breathing air
- Moisture content in breathing air cylinders does not exceed a dew point of -50 deg. F (-45.6 deg. C) at 1 atmosphere pressure
- Breathing air couplings are incompatible with outlets for non respirable worksite air or other gas systems. No asphyxiating substance shall be introduced into breathing air lines.
- Breathing gas containers shall be marked in accordance with the NIOSH respirator certification standard, 42 CFR part 84.

13. Tool Safety Program

Purpose

Use of tools makes many tasks easier. However, the same tools that assist us can, if improperly used or maintained, can create significant hazards in our work areas.

Employees who use tools must be properly trained to use, adjust, store and maintain tools properly.

Responsibility

Management

- Provide correct tools for assigned tasks
- Ensure tools are maintained and stored safely
- Provide employee training
- Provide for equipment repair

Employees

- Follow proper tool safety guidelines
- Report tool deficiencies and malfunctions
- Properly store tools when work is completed

Hazard Control

Engineering

- Properly designed tools
- Guards & safety devices

Administrative

- Tool sharpening program
- Use of PPE
- Control of tool issue
- Employee Training
- Controlled access to equipment and tool areas



General Safety Precautions

Employees who use hand and power tools and who are exposed to the hazards of falling, flying, abrasive and splashing objects, or exposed to harmful dusts, fumes, mists, vapors, or gases must be provided with the particular personal equipment necessary to protect them from the hazard. All hazards involved in the use of tools can be prevented by following five basic safety rules:

- Keep all tools in good condition with regular maintenance.
- Use the right tool for the job.
- Examine each tool for damage before use.
- Operate according to the manufacturer's instructions.
- Provide and use the proper protective equipment.

Hand Tools

Hand tools are non-powered. They include anything from axes to wrenches. The greatest hazards posed by hand tools result from misuse and improper maintenance.

Some examples:

- Using a screwdriver as a chisel may cause the tip of the screwdriver to break and fly, hitting the user or other employees.
- If a wooden handle on a tool such as a hammer or an axe is loose, splintered, or cracked, the head of the tool may fly off and strike the user or another worker.
- A wrench must not be used if its jaws are sprung, because it might slip.
- Impact tools such as chisels, wedges, or drift pins are unsafe if they have mushroomed heads. The heads might shatter on impact, sending sharp fragments flying.

Appropriate personal protective equipment, e.g., safety goggles, gloves, etc., should be worn due to hazards that may be encountered while using portable power tools and hand tools. Floors shall be kept as clean and dry as possible to prevent accidental slips with or around dangerous hand tools. Around flammable substances, sparks produced by iron and steel hand tools can be a dangerous ignition source. Where this hazard exists, spark-resistant tools made from brass, plastic, aluminum, or wood will provide for safety.

Power Tool Precautions

Power tools can be hazardous when improperly used. There are several types of power tools, based on the power source they use: electric, pneumatic, liquid fuel, hydraulic, and powder actuated. The following general precautions should be observed by power tool users:

- Never carry a tool by the cord or hose.
- Never yank the cord or the hose to disconnect it from the receptacle.
- Keep cords and hoses away from heat, oil, and sharp edges.



- Disconnect tools when not in use, before servicing, and when changing accessories such as blades, bits and cutters.
- All observers should be kept at a safe distance away from the work area.
- Secure work with clamps or a vise, freeing both hands to operate the tool.
- Avoid accidental starting. The worker should not hold a finger on the switch button while carrying a plugged-in tool.
- Tools should be maintained with care. They should be kept sharp and clean for the best performance. Follow instructions in the user's manual for lubricating and changing accessories.
- Be sure to keep good footing and maintain good balance.
- The proper apparel should be worn. Loose clothing, ties, or jewellery can become caught in moving parts.
- All portable electric tools that are damaged shall be removed from use and tagged "Do Not Use."

Guards

Hazardous moving parts of a power tool need to be safeguarded. For example, belts, gears, shafts, pulleys, sprockets, spindles, drums, fly wheels, chains, or other reciprocating, rotating, or moving parts of equipment must be guarded. Guards, as necessary, should be provided to protect the operator and others from the following:

- point of operation,
- in-running nip points,
- rotating parts, and
- flying chips and sparks.

Safety guards must never be removed when a tool is being used. For example, portable circular saws must be equipped with guards. An upper guard must cover the entire blade of the saw. A retractable lower guard must cover the teeth of the saw, except when it makes contact with the work material. The lower guard must automatically return to the covering position when the tool is withdrawn from the work.

Safety Switches

The following hand-held powered tools are to be equipped with a momentary contact "on-off" control switch: drills, tappers, fastener drivers, horizontal, vertical and angle grinders with wheels larger than 2 inches in diameter, disc and belt sanders, reciprocating saws, saber saws, and other similar tools. These tools also may be equipped with a lock-on control provided that turnoff can be accomplished by a single motion of the same finger or fingers that turn it on. The following hand-held powered tools may be equipped with only a positive "on-off" control switch: platen sanders, disc sanders with discs 2 inches or less in diameter; grinders with wheels 2 inches or less in diameter; routers, planers, laminate trimmers, nibblers, shears, scroll saws and jigsaws with blade shanks ¼-inch wide or less.



Other hand-held powered tools such as circular saws having a blade diameter greater than 2 inches, chain saws, and percussion tools without positive accessory holding means must be equipped with a constant pressure switch that will shut off the power when the pressure is released.

Electrical Safety

Among the chief hazards of electric-powered tools are burns and slight shocks which can lead to injuries or even heart failure. Under certain conditions, even a small amount of current can result in severe injury and eventual death. A shock also can cause the user to fall off a ladder or other elevated work surface. To protect the user from shock, tools must both have a three-wire cord with ground and be grounded, be double insulated, or be powered by a low-voltage isolation transformer. Three-wire cords contain two current-carrying conductors and a grounding conductor. One end of the grounding conductor connects to the tool's metal housing. The other end is grounded through a prong on the plug. Anytime an adapter is used to accommodate a two-hole receptacle, the adapter wire must be attached to a known ground. The third prong should never be removed from the plug. Double insulation is more convenient. The user and the tools are protected in two ways: by normal insulation on the wires inside, and by a housing that cannot conduct electricity to the operator in the event of a malfunction.

Electric Power Tool General Safety Practices

- Electric tools should be operated within their design limitations.
- Gloves and safety footwear are recommended during use of electric tools.
- When not in use, tools should be stored in a dry place.
- Electric tools should not be used in damp or wet locations.
- Work areas should be well lighted.

Medical Equipment Safety Guidelines

Tactical Medical Service provides its clients with the best quality equipment and supplies available to ensure that delicate operations can be performed on site. Some of this equipment requires high end medical knowledge. Even though every member of the TMS team excels in their duties, they might encounter equipment they are not completely familiar with. In this situation, they are required to undergo proper training before using tools that are new or which they are not acquainted with.

Aerosol Cans

Aerosol cans are dangerous at temperatures over 120 deg. F. (48 deg. C).

Damage to an aerosol can may increase the pressure enough to rupture the can resulting in metal fragments being sprayed in all directions.



Puncturing an aerosol can, tampering with the nozzle or leaving the can where it can rust, may also result in the can rupturing.

Empty aerosol cans should be disposed of in the proper waste receptacles.

Jacks

All jacks - lever and ratchet jacks, screw jacks, and hydraulic jacks - must have a device that stops them from jacking up too high. Also, the manufacturer's load limit must be permanently marked in a prominent place on the jack and should not be exceeded. A jack should never be used to support a lifted load. Once the load has been lifted, it must immediately be blocked up. Use wooden blocking under the base if necessary, to make the jack level and secure. If the lift surface is metal, place a 1-inch-thick hardwood block or equivalent between it and the metal jack head to reduce the danger of slippage. To set up a jack, make certain of the following:

- the base rests on a firm level surface,
- the jack is correctly centred,
- the jack head bears against a level surface, and
- the lift force is applied evenly.

Proper maintenance of jacks is essential for safety. All jacks must be inspected before each use and lubricated regularly. If a jack is subjected to an abnormal load or shock, it should be thoroughly examined to make sure it has not been damaged. Hydraulic jacks exposed to freezing temperatures must be filled with an adequate antifreeze liquid.

Preventive Vehicle Maintenance Program

Purpose

A preventive maintenance program for vehicles and equipment is developed to help keep the equipment in the best operating condition possible and to help prevent any major breakdowns also to ensure the safety of the operators. This involves elements such as scheduling oil sampling, inspections, training, work scheduling, and recordkeeping. To meet the requirements, principles of the Caterpillar Maintenance control System (MCS) and Preventive Maintenance Planner (PMP) will be applied to the project.

MCS - helps monitor and manage maintenance activities by recording the maintenance procedures and materials needed, planning the intervals between maintenance, identifying maintenance due and recording the completion of the activities.

PMP - formalizes the activities required for periodic preventive maintenance, and provides a means to record the needed filters, fluids or other materials. Prototype checklists are available and can be printed each time maintenance is performed.

The system will perform and provide reports on the following:

- Calculate due dates for Preventive Maintenance (PM) and scheduled repairs.
- Track backlogged activities.
- Track machine components.
- Report timeliness of completed PMS and scheduled repairs.
- Track checklist and time/materials list.
- Maintain PM, inspection, and repair history
- Calculate and trend cost-per-hour and availability.

The system will print the following:

Master Listing

- Equipment Master Listing

Scheduling

- Maintenance Due Report
- Maintenance Timeliness Report
- Cost & Availability Summary

Operational



- Components Code Ranking Report
- PM - Repairs History Report
- Labor & Materials Report
- Consumable Trends Report

Planning

- Maintenance Planning Report
- Component Planning Report

Component Tracking

- Component List Report
- Component Installation Report
- Component Life Cycle Report

Responsibilities

Site Forman, Management and Project Coordinator are responsible for the following, to ensure successful preventive maintenance program is provided for the project.

- Data collection, input, and report generation
- MCS information retrieval
- MCS information backup
- Acquisition, installation, and setup of the computer, printer, and operating system
- Definition and Maintenance of system
- Development of the system backup procedures
- Understanding of the system data requirements, data flow, and reports
- Identification of setup tables, equipment information, and maintenance activities entered at system setup
- Development and implementation of required data collection procedures
- Utilization of the system information to monitor equipment performance and maintenance effectiveness

Training

Training is important to the successful use of the system and ensures preventive maintenance program is implemented. Personal who uses the system, will be required to have the basic skills but not limited to:

- Windows XP basics
- Data input, display, and report
- Backup procedures
- Input form completion and report interpretation
- Backup procedures (frequency, methods)

Maintenance Interval Schedule

The Maintenance Interval Schedule is used to identify when equipment is due for PM. There are two ways of identifying services; one is through hour meter that tracks the number of hours the equipment has been operating or conducting monthly service.

There are also different types of PM service levels, depending on equipment, example, all the heavy equipment have, up to five (5) different level of PM services and each PM checklist is different, light equipment have only two different PM services but have only one PM checklist. Those preventive maintenance services apply to all the vehicles and equipment classes, but some adjustments may be required due to the seasonal type of workload, the weather and the wide variety of equipment type. It is essential that manufacturer's recommendations be used as supplementary guides where special work conditions and environments are encountered.

Before each consecutive interval is performed, all of the maintenance requirements from the previous interval must also be performed.

PM Tasks - both the operator and the mechanic are responsible for carrying out the preventive maintenance on a piece of equipment.

Field Inspection - inspection report has to be conducted before or at the end of project season.

Activity Description - a breakdown of each activity where work is identified through the PM Checklist and is a guide to perform the repair or replace and adjust a component.

Please refer to the various supporting documents to the Vehicle Preventive Maintenance Program that have been enclosed in the appendices.

14. Helicopter Safety

General Safety Practices



General Safety practices that shall apply to the helicopter operations are detailed below.

- The pilot of a helicopter that is hoisting materials shall be competent to fly an externally-loaded helicopter.
- The pilot shall be in charge of the hoisting operation and shall determine the size and weight of loads to be hoisted and the method by which they are attached to the helicopter.
- Ground personnel including signallers for a helicopter being used to hoist materials, shall be knowledgeable with respect to helicopter safe operating practices.
- While transporting an external load, the helicopter pilot shall follow a flight path that minimizes the risk to ground personnel and structures.
- The Site Superintendent or his designate shall take precautions against hazards caused by helicopter rotor downwash.
- To minimize risks associated with helicopters, passengers and ground personnel shall follow the guidelines stated below. Also, make use of the safety posters to be displayed within the camp.

Approaching a Helicopter

- Secure any loose articles of clothing before approaching or departing a helicopter on level terrain, always approach and depart the helicopter from the front (avoiding the rear rotor) and always stay within the view of the pilot.
- On uneven terrain, wait for and follow instructions given by the pilot. Never approach or leave a helicopter on the uphill side.
- Always walk in a crouched position and keep your head down. (if your hands are free, hold onto the front of your knees).
- Exercise extreme caution when loading and unloading equipment from a running helicopter. Wear impact resistant safety glasses or goggles. The equipment to be loaded / unloaded must be carried horizontally below waist level, in a secure manner (not to be adversely susceptible to the rotor downwash).
- Fasten seatbelts and secure doors, before take-off.
- Be equipped with a life jacket when operating over water.
- Smoking is not permitted in or around the helicopter.
- Never throw anything from a helicopter.
- Keep clear of the landing area when the helicopter is landing or taking-off.
- Remove any objects from the landing area that may be swept up by the helicopter downwash stream.

15. Cold Weather Clothing & Precautions

Frostbite and hypothermia are the conditions most often associated with cold exposure. Cooling of the brain leads to confusion and poor co-ordination, which inhibits the ability to recognize danger. Warning signs of hypothermia can include complaints of nausea, fatigue, dizziness, irritability or euphoria. Workers can also experience pain in their extremities (hands, feet, ears, etc.), and severe shivering. Workers should be moved to a heated shelter and seek medical advice when appropriate.

Elements of an effective prevention and injury reduction program include assessing the risk of cold-stress injury before it happens, provision for dry, insulating clothing, gloves, facial and eye protection, and immediate access to First Aid.

The table below presents the recommended exposure times which are based on wind chill temperature, a scale based on air temperature and wind speed.

Threshold Limit Values Work/Warm-up Schedule for Four-Hour Shift

Air Temperature - Sunny Sky		No Noticeable Wind		5 mph Wind		10 mph Wind		15 mph Wind		20 mph Wind	
°C (approx.)	°C (approx.)	Max. work Period	No. of Breaks *	Max. Work Period	No. of Breaks						
-26° to -28°	-15° to -19°	(Norm breaks) 1		(Norm breaks) 1		75 min.	2	55 min.	3	40 min.	4
-29° to -31°	-20° to -24°	(Norm breaks) 1		75 min.	2	55 min.	3	40 min.	4	30 min.	5
-32° to -34°	-25° to -29°	75 min.	2	55 min.	3	40 min.	4	30 min.	5	Non-emergency work should cease	
-35° to -37°	-30° to -34°	55 min.	3	40 min.	4	30 min.	5	Non-emergency work should cease			
-38° to -39°	-35° to -39°	40 min.	4	30 min.	5	Non-emergency work should cease		Non-emergency work should cease			
-40° to -42°	-40° to -44°	30 min.	5	Non-emergency work should cease		Non-emergency work should cease		Non-emergency work should cease			
-43° & below	-45° & below	Non-emergency work should cease		Non-emergency work should cease		Non-emergency work should cease		Non-emergency work should cease		Non-emergency work should cease	

* The work-break schedule applies to any four-hour period with moderate or heavy activity. The warm-up break periods are of 10 minute duration in a warm location. At the end of a 4-hour period, an extended break (e.g. lunch break) in a warm location is recommended. Whenever there is exposure to an equivalent wind chill temperature of less than -7° C, a heated shelter will be made available.

Cold Weather Precautions

- Don't ignore early signs of cold exposure; they won't go away. Seek shelter immediately.
- ***Never put snow or ice on the frozen part of flesh.*** This will only cause further damage by keeping the ice crystals in the skin frozen.
- Don't rub the injured area to try to rewarm it, you will damage the frozen tissue.
- Remove any wet or frozen clothing and replace with dry blankets or a sleeping bag.
- Don't try to rewarm the area by yourself, seek first aid.
- Do drink warm, non-alcohol beverages - something sugary, like hot chocolate.
- Prevention is the best medicine; but if you are unfortunate enough to experience frostbite, be warned that the rewarming process is extremely painful. Blistering and swelling are often associated, so it is very important to report to site infirmary as soon as possible.
- Don't attempt to rewarm the part yourself, especially if there is a chance of it refreezing.
- Once an area has recovered from frostbite, you must be careful because it will be very susceptible to freezing. This is because the ice crystals cause varying degrees of tissue damage; this damage can be permanent, even when it's not visible.
- Remember that hypothermia is not limited to extreme weather, in fact, most cases occur when the temperature is above zero.
- Dress in layers, you can always remove clothing if you are too warm.
- If you are driving in a vehicle, you should still dress for the outdoors.



16. Operation Policy during “White Outs”

As the weather deteriorates, road conditions will be assessed by Tactical Medical Service. TMS will make the decision as to whether or not it is “White Out” conditions.

If “White Out” conditions are determined, the following will occur:

- Tactical Medical Service will commence radio dispatch. All travel between points is then to be coordinated through the dispatcher.
- When the road is deemed unsafe for travel, road closure will be announced by the Tactical Medical Service Safety Officer. NO ONE is to leave the area he/she is in at that time. NO EXCEPTION WITHOUT AUTHORIZATION.
- Pickups on route are to park. Radio dispatch your location.
- Employees will stay inside. Do not attempt travel between buildings or vehicles unless tied with a safety line.
- Radio calls into dispatch from each area will take place every two hours to report their situation.
- Dispatcher will organize support if and when required. Dispatching will cease after road has been declared “OPEN” Tactical Medical Service.

Each contractor will make available:

- Radio communication in each mobile vehicle traveling between the work location and camp.
- Radio communication at each work location.
- Enough food to sustain their crew for 48 hour White Out period.
- Enough fuel to maintain heat for personnel and to sustain equipment standby for a 48 hour period.
- Blankets/sleeping bags to maintain warmth for each person to work site.

17. Travel on Frozen Lakes and Rivers

It is critically important to evaluate the strength of the ice before moving vehicles or equipment onto it. The thickness of the ice must be tested frequently, using an auger drill.

Table 1 indicates the weight that will be supported by varying thickness of clear, blue lake-ice, provided the load remains in motion. Clear, blue river-ice, with moving water beneath it is not as strong as lake-ice; loads should be reduced by at least 15 percent. This reference chart does not refer to salted water ice.

The strength of slush ice varies with the degree of compaction, but assume it will only carry half the load supported by clear, blue ice of the same thickness. Cracks in the ice also severely reduce its ability to support a load. The figures given in Table 1 do not apply to stationary loads.

TABLE 1 STRENGTH OF CLEAR, BLUE LAKE -ICE		TABLE 2 MAXIMUM SAFE SPEEDS DRIVING ON ICE	
Thickness of Ice(cm)	Permissible Load	Depth of Water (m)	Maximum Safe Speed (km/h)
5.0	One person walking on foot.	0.3	3
7.5	A small group walking in single file, (1m apart)	0.5	5
19.0	Passenger car (1800kg)	1.2	8
20.0	Light truck (2250kg)	2.5	11
25.0	Medium truck (2250)	5.0	16
30.0	Heavy truck (6.5-7.5t)	10	22
40.0	Small tractor (10t)	20	30
50.0	22.5 tonnes		
60.0	40 tonnes		
75.0	65 tonnes		



Ice will sag under the weight of a load. If the load is a moving vehicle, the sag becomes a wave traveling ahead of it. The faster the vehicle moves the steeper the wave will become.

Excessive speed will result in cracks developing, and possible loss of the load, even though the thickness of ice was theoretically capable of supporting it. The depth of water beneath the ice also affects propagation of the water, but if this is not known, assume it is shallow. Maximum safe speeds for varying water depths are shown in Table 2.

If cracks develop under your vehicle while you are driving across ice, slow down and be ready to jump; flotation jackets should always be worn when working on ice. Do not wear a seat belt. If the vehicle is standing still, start in low gear and move away very slowly. If the vehicle is moving slowly, slow down to two (2) miles per hour. Figure 1 shows the percentage reduction in speed required to negotiate cracks parallel, oblique and at right angles to the direction of travel. Always attach timbers across the back and front of the tractor. These timbers should never be less than 16 feet in length.

When traveling over ice, always trail at least 100 feet of cable securely attached to the tractor or sloop. Should a breakthrough occur, this cable could greatly assist recovery operations.

All employees should wear sunglasses in open snow covered areas.

Figure 1

100% NO CRACKS WITHIN 100FT	44% CROSSING CRACK
88% STRADDLING CRACK	25% CRACKS AT 90 DEGREES
44% DRIVING ON ONE SIDE OF CRACK	12 % CRACKS AT 45 DEGREES



18. ATV Safety

ATVs might be used for work at remote sites. With ATVs, reported cases of serious injury and death have increased along with their increased use. Most of these injuries and deaths can be attributed to improper use of ATVs. Make ATV safety a priority !

Environmental Health and Safety makes the following recommendations for the safe operation of ATVs. Detailed information is provided in subsequent sections.

- Read the owner's manual carefully and follow the operating procedures described. Pay special attention to the warnings contained in the manual and all labels on the machine.
- Do not operate an ATV without proper instruction. Take a training course.
- Always wear an approved motorcycle helmet when using an ATV. Also wear eye-protection, boots with ankle supports, gloves, long pants and a long sleeved shirt or jacket as conditions warrant.
- Do not allow anyone under 18 years old to operate an ATV.
- Never carry a passenger on an ATV. Carrying a passenger may upset the balance of the ATV and may cause you to lose control.
- Never operate an ATV on pavement. The vehicle is not designed to be used on paved surfaces and may be difficult to control.
- Do not consume alcohol or drugs before or while operating an ATV. Of course, this is also against Camp policy.
- Do not operate an ATV at excessive speeds. Go at a speed that is proper for the terrain, visibility conditions, and your experience.
- Never attempt to do wheelies, jumps or other stunts.
- Be cautious when operating an ATV, especially when approaching hills, turns, and obstacles and when operating on unfamiliar or rough terrain.
- Do not lend your ATV to anyone who has not taken a safety-training course, who is an inexperienced driver, or who is under 18 years old.

Specific Safe Driving Tips

Make Sure the AVT is Ready for Operation

You can ride further in one hour on an ATV than you can walk in a day, so a pre-ride inspection will reduce your chance of being stranded. Check the following items on your vehicle before operation:

- Wheels and tires - make sure air pressure in tires is at recommended levels. A one-pound difference in air pressure can cause control problems. To accurately measure ATV tires, you will need a low-pressure gauge; regular tire gauges will not be accurate enough. Also, check tires for cuts, gouges, inadequate tread or excessive wear. Tighten axle nuts and secure by cotter pin.



- Controls and cables - check location and make sure all work. Throttle should move smoothly when handlebar is in different positions. Brakes should be properly adjusted and foot shift firmly fastened.
- Fuel and oil - check oil and fuel levels.
- Lights and electrical system - ignition switch should stop engine when in the "off" position. When in the "on" position, headlights and taillights should work.
- Chain and/or drive shaft chassis - inspect, adjust and lubricate chain and/or drive-shaft chassis. Check for nuts and bolts loosened by vibration.

Wear Appropriate PPE

- A helmet can prevent serious head injuries by resisting penetration and absorbing shock. Look inside the helmet for a sticker from one or more of these agencies: Department of Transportation (DOT), Snell Memorial Foundation, or American National Standards Institute (ANSI). Helmets must be able to resist a blow from a sharp object, stay in place, and provide a minimum amount of peripheral vision. Helmets used for bicycling, skateboarding and rollerblading may not be used.
- Eye Protection, such as goggles or a face shield, can prevent you from getting hit in the eyes and being blinded. A face shield may be attached to your helmet. If not, wear an ANSI-approved pair of goggles or glasses with hard-coated polycarbonate lenses.
- Off-road style gloves offer your hands more comfort and can keep them from getting sore or cold. Gloves protect hands from scrapes and scratches, improve grip on the controls, and reduce soreness from the pressure of holding onto the handlebars.
- Boots should be low-heeled to prevent your feet from slipping off the footrests. Over the calf boots provide even more protection. Boots protect feet from trail debris and keep feet properly placed on the footrest, which is important in maintaining balance and control of the ATV.
- Long sleeved shirts and long pants can protect your skin from scratches while riding an ATV. A sturdy, long-sleeved shirt or jacket and long pants will protect the arms and legs from cuts or scrapes caused by trail debris and branches. Proper clothing also protects the operator from problems caused by weather conditions, including sunburn and frostbite.

Start the ATV Properly

- Brakes - always engage the parking brake.
- Neutral - the transmission always must be in the neutral position.
- Engine - the engine stop switch should be in the "run" or "start" position.
- Choke - if the engine is cold, put the choke in the "on" position and start the engine according to the manual.



Operate Your ATV in a Safe Manner

- ATVs are designed to be used off-road only. Many accidents occur because of collisions with other vehicles due to riding or crossing a road illegally or improperly. Make sure you use extra caution near roads and yield the right of way to oncoming traffic.
- ATVs are only designed for one rider - the operator. A passenger can impair the driver's ability to shift weight to steer and control the ATV.
- Braking - begin to slow down early. Look straight ahead when you are stopping in a straight line. Look around the turn as you slow in a curve. Shift to a lower gear as you decelerate.
- Turning - you must be able to coordinate speed and body position to maintain balance while turning. Slow before the turn and gently increase the throttle as you exit the turn. Support your weight on the outer foot peg and lean your upper body into the turn.
- Hill climbing - some hills are too steep for your ATV, regardless of your abilities. Shift your weight forward by sliding up on the seat as you go uphill.
- Hill descending - to go downhill, shift your weight back; use the brake(s) to slow down as you descend the hill. Always descend in gear and never descend in neutral. Front brakes are very helpful in downhill braking.
- Use lights, reflectors, and/or flags to make the ATV highly visible.
- A unique feature of the ATV is that operator position on the seat can significantly change the center of gravity. Moving forward will reduce the risk of rear overturns.
- Two general rules are to not carry more than one-third the vehicle's weight on the rear carryall. Divide weight evenly between the front and the rear. Finally, never tow a load heavier than the weight of the ATV plus the operator's weight.

Inform the site mechanic of any problems encountered. Do not use ATVs that have been found with mechanical problems during inspection

19. Safe Operations of Skidoos

Normal start-up operations

- First check to make sure throttle is free before starting motor.
- Check oil level and fuel level.
- Agitate the fuel in tank before starting, as oil will settle.
- After starting motor, check to make sure track is free before mounting machine.
- Shatter proof goggles and helmet must be worn.

Fuel mixing procedures

- To mix the gasoline and oil always use a separate clean container. Never mix in your snow machine tank.
- Put the full amount of oil required for the total mixture into the container, add approximately half the amount of gasoline to be mixed and shake thoroughly.
- Add the remainder of the gasoline and again thoroughly agitate the container.
- Using a funnel with a fine mesh screen to prevent the entry of water and foreign particles, transfer the fuel from container to tank.

Emergency equipment and preparation

- Always carry the following emergency equipment:
 - First Aid Kit
 - Wrench
 - Snow shoes
 - Tools
 - Drive Belt
 - Drive chain or spare links
 - Spark Plugs
 - Axe
 - Radio
- Wear proper clothing, including goggles
- Wear extra-warm and waterproof boots.

Operations and safety

- Use the rigid trailer hitch while pulling a toboggan or sled.
- Stop before tracks or roads.
- Don't cross in front of another vehicle in motion.
- Don't smoke while refuelling.
- Don't cross a river or lake before checking thickness of ice.
- Don't show off and do acrobatics.
- Don't overload a machine. Haul load on sled instead.

20. Wildlife Management Plan

Hunting, Fishing and Firearm Policy

Hunting and fishing is prohibited for all employees, contractors and subcontractors staff..

All firearms are to be stored inside a proper locked cabinet. The lock will be under the site superintendent responsibility.

Wildlife Interaction

In order to minimize disturbance to wildlife and enhance site health and safety, all site personnel will adhere to the following directives:

- All man-bear interactions shall be immediately reported to the site superintendent and the safety officer. All interactions shall be then reported by the site superintendent to the nearest Wildlife Office or by phone(phone numbers will be available on site).
- Dedicated bear monitors must be on site for the duration of the project. They shall escort working crews at all time, especially when vehicle and heavy machinery are not used and when work is done in remote areas of the site.
- Kitchen waste and other refuse shall always be managed so they are not accessible to bears and other scavengers.
- Harassment to any wildlife is prohibited. All personnel shall ensure that there is minimal disturbance to any nesting birds and wildlife in the area.
- Feeding wildlife is prohibited.
- To supply the camp with fresh water, the water intake hose comply with Fisheries and Oceans' Fresh Water Intake End-of-Pipe Fish Screen Guideline (ISBN 0-662-23168-6).
- No one shall disturb or destroy the nests or eggs of migratory birds. Areas with nests containing eggs or young should be avoided until nesting is complete and the young have left the nest.
- Known environmentally sensitive areas (denning, nesting, etc.) shall be avoided by a minimum distance of 250 metres.
- All work shall be ceased when critical wildlife cycles are observed (e.g. Caribou migration, calving, fish spawning or raptor nesting). Report immediately these observations to the site superintendent who will notify the owner's representative.
- **All wildlife encounters shall be reported to the site superintendent.** A log of wildlife encounters including date, location, type of wildlife and actions/mitigation measures taken shall be prepared and reported to the owner's representative after each site activity seasons.

Foxes are not normally considered dangerous but are susceptible to rabies. If you notice an animal acting erratically (i.e. attacking stationary objects, shivering violently, foaming at the mouth) report



it immediately. Rabies is very infectious and can be caught from the bite of an effected animal. Foxes can be very sly animals; they will circle around you and attack from the rear.

Wolves are rare and not a problem if left alone.

Moose are not to be disturbed. It is a provincial offence to perturb their winter habitat everywhere in Canada.

Polar Bears, Black Bears and Grizzly Bears

- Be alert at all times.
- Respect all bears - they can be dangerous.
- Never approach a bear for any reason.
- **Never feed the bears.**
- **Never get between a mother bear and her cub(s).**
- Follow the given plan of action for dealing with bears.
- There is always a possibility you may surprise a bear at close range, or encounter a bear unafraid of people. **THOUGH THERE IS NO GUARANTEED FORMULA FOR REACTING TO A BEAR ENCOUNTER, EACH ONE BEING UNIQUE THE FOLLOWING TIPS MAY HELP.**
- Stop, stand still and stay calm.
- Assess the situation.
- If you see a bear at a distance, try to leave unnoticed. Quietly walk back the way you came or make a wide detour around the bear. If that is not possible or if the bear is approaching, get out of sight and wait for the bear to leave. Keep an eye on the bear and stay downwind. Make sure you do not come between a bear and its cubs.
- If the bear is aware of you, help it identify you as a person. It may leave. Staying upwind will help it to smell you. Talk in low tones and slowly wave your arms.
- In a close encounter, act as non-threatening as possible. Do not shout or make sudden movements which might provoke the bear, and avoid direct eye contact. At 50 metres, even if the bear is displaying “threat” behaviour, there is probably still time for you to avoid an encounter. Back away slowly, leaving behind an article of clothing or gear to distract the bear. Leave food only as a last resort.
- If time and circumstances permit, try to scare the bear away by firing warning shots, flare cartridges or noisemakers, or by chasing it with a vehicle.
- Do not run from a bear unless you are sure you can reach a safe place before the bear catches you. Running may cause the bear to chase you and a bear is faster than you are.
- A bear charges at high speed on all four legs. Many charges are bluffs. Bears often stop or veer to the side at the last minute. However, if contact appears unavoidable, be prepared to shoot if you are carrying a firearm.
- If you are unarmed, make every attempt to protect your vital organs. Drop to the ground and lie on your side, curled into a ball with your legs drawn to your chest and your head



buried in your knees. Clasp your hands behind your neck. Keep your legs tightly together. Try to stay in this position even if moved. Try not to resist or struggle as it may intensify the attack. An injury may be reduced or prevented by keeping still.

- Always leave a bear an open avenue of escape.
- Avoid direct contact and back away slowly.

Bear Deterrent Method

Bear deterrence comes under the direction of the Site Supervisor. Polar bear monitors are hired on sites.

Bears are curious and often investigate any strange object, smell, or noise. The remarkable sense of smell often leads bears to the garbage dump. If the bear does not find food, it may not return once its curiosity has been satisfied. If it successfully obtains food from human source, it begins to associate the place with meals; it may eventually begin to associate food with anything human and investigate areas used by workers, whether or not food is actually detected.

A bear will gradually lose its tendency to avoid people as it learns to associate them with food.

The bear may become bold and aggressive. The bear must not be allowed to obtain food. It is easier to prevent a habit from forming than to break it.

Bear Deterrent Method

- Properly trained bear monitors are responsible for initial deterrence of bears.
- Never attempt to scare off the bear using your vehicle, horn, lights, etc. unless there is an imminent and close risk for human safety. Do not take your vehicle outside of recognized areas of travel, stay to the cleared roadways only. Care must be taken to insure that the bear is not injured. ***If a bear is injured, notify the Safety Responsible immediately.***
- The Safety Officer must be called out immediately whenever a bear is spotted near the accommodation building, the work site or on the airstrip.
- The Wildlife Management Services must be called out immediately if during a deterrence pursuit, a bear becomes aggressive.

Polar Bear Control with Snowmobile

- Where possible, Inuit employees who are familiar with the practice of chasing bears must be used.
- The ice thickness within 1,000 meters of the chase area cannot be less than 18 centimetres (7"). This must be determined before beginning to chase the bears on to this ice. (7.4" will hold a vehicle of 1,800 kg. GVW.) This is to be done by using an ice auger and following the "Working on Ice" Surface procedures.



- A minimum of two snowmobiles must be used when chasing bears. The snowmobiles must remain within close proximity of each other.
- Bear chasers must hold a valid Firearms Acquisition Certificate.
- One of the two chasers will backup the other, and will carry the shotgun with 'slug' bullets for protection. The other will carry the second shotgun with flares or cracker shells.
- Bears must not be chased to exhaustion. They must be allowed to rest until they can be herded to locations away from the site.
- It is expressly forbidden to hunt, wound or kill any bears.
- The bears are not to be chased farther than 1 (one) km. from the shoreline.
- While chasing polar bears, appropriate safety equipment and clothing will be worn.
- Weather conditions must be reviewed with the Supervisor prior to chasing bears from the property.
- The objective of this procedure is to keep the site workings and Accommodation areas free from Polar Bear activity.

21. Communication Systems

A multi-channel radio communication system will be established on the site. The site will also be equipped with satellite phone and facsimile services. Communications shall be directed toward the following priorities and concerns:

- The bear monitors are informed of the whereabouts of site personnel at all times.
- Site personnel are to communicate on a regular basis regarding their whereabouts and to post immediate warnings regarding any imminent or potential danger.
- To alert site personnel with respect to emergency situations.
- To communicate with remote parties (i.e. off-Island), with respect to emergency situations.
- To communicate with or monitor aircrafts traveling to and from the site.

Available communication systems should also be used for administrative matters but should never be used for this purpose when an emergency situation is occurring.

Communication systems can also be used, after hours, for personal reasons.

22. Fire Safety & Emergency Guidelines

Fire Precautions

The following are potential fire hazards. Hazards can be present in occupied buildings, infrastructures under construction and other indoor/outdoor locations:

- Electrical fires caused by defective extension cords or defective electrical tools and/or equipment.
- Trash fires caused by cigarettes or open flames coming in contact with paper products or other readily combustible materials.
- Combustible construction material catching fire because of their proximity to welding, cutting and/or soldering operations.
- Spontaneous combustion caused by improperly stored waste materials.
- The use of temporary heaters with open flames that are either out of adjustment, improperly connected, or too close to combustible materials.
- Human errors and/or negligence during catering duties conducted in the construction camp kitchen.
- Human errors and/or negligence with ignition sources near fuel tanks and fuel distribution systems.
- Human errors and/or negligence during garbage and/or barrel content incineration.

To prevent fires from occurring, the following fire prevention rules shall be applied and be reviewed during on-site safety meetings:

- Smoke alarms conforming to CAN/ULC-S531, “Standard for Smoke Alarms” will be installed in each sleeping room of the construction camp. Smoke alarms will be installed, inspected, tested and maintained in conformance with manufacturer’s specifications.
- All electric power units, lines and lights (permanent or temporary) must be installed in strict accordance with existing local codes.
- Fire extinguishers will be placed throughout buildings and vehicles (excluding ATVs).

Anyone caught tampering with or removing fire extinguishers from their location may be subjected to immediate suspension. Fire extinguishers must be provided:

- Where flammable materials are stored, handled or used.
- Where temporary oil- or gas-fired equipment is being used.

- Where welding or open-flame cutting is being done.
- On each building being constructed or renovated.
- Anyone (including Sub-Contractors) using welding equipment or any other equipment with an open flame must have a 20-lb ABC-type fire extinguisher in the immediate area.
- Proper precautions (isolating welding, cutting and/or soldering operations, removing fire hazards from the vicinity, providing a fire watch, etc.) for fire prevention shall be taken in areas where welding or other “hot work” is being done. No welding, cutting or heating shall be done where the application of flammable paints, or the presence of other flammable compounds, or heavy dust concentration creates a fire hazard.
- All fuel and flammable liquids must be stored in appropriate (approved) containers.
- Flammable liquids will be kept in closed containers when not in use. A dedicated container will be used to store all flammable liquids.
- Conspicuous and legible signs prohibiting smoking shall be posted in refuelling areas (i.e. signs shall include Inuktitut for Nunavut territory).
- Pressurised gas cylinders must be provided with safety caps. Cylinders are to be stored, and secured in vertical position.
- Oxygen, and acetylene cylinders must be secured in their carriers with a fire extinguisher attached.
- Firefighting equipment will be conspicuously located and readily accessible at all times, shall be periodically inspected, and be maintained in operating condition. Fire extinguishers will also be promptly refilled after use.
- All workers shall be able to communicate promptly with the site superintendent to report a fire not signified by existing alarm systems.

Inspection and Preparedness

- All camp alarms are to be checked each week by the health and safety officer and be repaired if not in working order.
- All fire extinguishers are to be checked each week and recharged when required.
- All sleeping rooms are to have: “No smoking” and “Emergency Exit” signs.
- All camp window shutters are to be open at all times.
- Camp cook stove air filters and hood are to be kept clean.
- All hot water heaters and furnace rooms are to be checked by the health and safety officer at the camp opening and every 30 days, and repaired if out of order.
- All light fixtures are to be checked for overheating and for correct bulb size (60 Watt).
- Emergency lights and emergency exit lights/signs in hallways are to be checked by the health and safety officer at the camp opening and every 30 days, and repaired if out of order.
- All entrance lights on outside of building are to be in working order.
- All employees and camp residents are to be given proper instruction by the health and safety officer on camp safety and fire drill procedures.
- Other maintenance duty, check list and inspection logs are presented at the end of the section.



Duties and Responsibilities

As part of the firefighting procedures, the Contractor will be responsible to implement, through its site representative(s), the following procedures:

- To authorise the use of personnel, and applicable equipment to fight the fire(s) using the most secure, and reliable method, in accordance with TMS procedures.
- To implement all required safety, and security procedures at the site of the fire.
- To mobilise all available personnel, equipment, and tools as required.
- To comply with all applicable guidelines and regulations.
- To provide documentation for all events, and actions to TMS representatives.
- To ensure that appropriate resources required for fire prevention and firefighting are made available.

Training and Drills

All personnel on site shall be informed that any fire event that does not trigger an alarm (bell), whatever the extent, have to be reported immediately to the site superintendent or its authorised representative.

A chief fire fighter shall be named by the Site superintendent to control emergency situations. He shall be knowledgeable of state-of-the-art firefighting techniques, rules, and regulations. The chief fire fighter shall be responsible at all time for firefighting operations. The site superintendent with the

Health and Safety Officer shall select a group of 4 to 6 on-site personnel to be assigned to firefighting operations in case of an emergency. These persons shall be known as the supervisory staff. These persons shall be aware of available firefighting equipment, and protective clothing. They shall also be responsible for implementing emergency procedures and coordinate other workers in the case of fire emergencies.

The firefighting crews (supervisory staff) shall also be aware that firefighting actions, and techniques employed will depend on a variety of factors. These include, but are not limited to:

- the proximity of combustible materials to the source of fire;
- potential occupants (victims);
- destruction of utilities (i.e. the construction camp, the recreational building, warehouses, material storage facilities, helicopter, fleet of vehicles);



The fire fighting team shall also be aware that, if a fire occurs, the protection of human health and safety shall be a priority. Even if emergency procedures are implemented to rapidly limit damages from accidental fires, human injuries, and/or exposure during an emergency fire situation is to be considered as a real concern.

TMS personnel on site will participate to fire fighting drills, as scheduled and indicated by the site superintendent. These drills shall mainly be used to determine how much time it would take to evacuate buildings, to conduct head counts, to inform all camp resident of the muster point. Drills shall also take into consideration:

- the safety features provided in the construction camp;
- the desirable degree of participation of occupants other than the supervisory staff;
- the number, and degree of experience of participating supervisory staff;
- the testing, and operation of fire emergency systems installed in the construction camp.

During drills, the supervisory staff shall be trained for the main elements on how to safely, and efficiently fight a fire with available equipment on site, as the case may be. The type and nature of combustible materials in each facility (buildings, vehicles, fuel storage area, storage facilities) shall be considered during training.

Emergency Procedures

Upon discovery of a fire, specific procedures shall be implemented by the person(s) who first noticed the emergency situation. These procedures are as follows:

- Immediately warn other personnel working near the fire area;
- Evacuate the area if health and safety are judged to be threatened;
- Attempt to implement rescue procedures on endangered remaining occupants if such procedures are judged to be safe;
- Report immediately to the site representative all relevant information concerning the fire event such as the location, and approximate speed of propagation of the fire, the presence of remaining occupants, and the nature of nearby combustible material.

The site superintendent (or its authorised representative) shall then be responsible to implement the following procedures:

- Verify whether site workers are endangered, and/or missing;
- Mobilise crews, and equipment to combat the fire;
- Coordinate with the owner site representative;
- Dispatch urgent activities;
- Communicate with the project manager;
- Provide temporary shelter or evacuation.

Other potential actions at the scene of a fire may involve:

- Establishing an emergency headquarters.
- Establishing adequate communications.
- Defining a working area, and establishing a control perimeter.
- Rescue and fire fighting including fire breaks.
- Notify hospitals of casualties including number, and type.
- Warn and mobilise additional service personnel.
- Warn of spreading of fire to additional areas.
- Set up an inquiry system.
- Determine the needs, and make arrangements for supplementary water supplies.
- Eliminate hazards from damaged utilities.

Temporary Shelter

If the construction camp and/or the recreational building are partially or totally destroyed by a fire event, other facilities shall be considered to temporarily shelter the workers. These temporary facilities shall ensure sufficient bear protection and shall be able to provide minimal hygiene support services.

Otherwise, evacuation procedures shall be implemented.

Evacuation

Procedures to evacuate peoples from the site may be required based on a fire event. In such a case, persons suffering from injuries, and/or trauma (critical incident stress) shall be removed first.

The site superintendent in collaboration with site medic shall then decide which persons (workers) have to be further evacuated.

Reporting and Assistance

Any fire events shall be documented by the Contractors and reported to the owner's representative.

Reports shall include:

- date/time of the incident;
- location of the fire incident;
- type and estimated quantities of damages;
- specific cause of the incident;



- action taken during firefighting procedures;
- whether assistance was required, and in what form;
- whether the fire caused human injuries, and to what extent;
- comments, and recommendations;
- name, position, and employer of person who is reporting the fire event; and
- name, position, and department of the person to whom the fire event is reported.

Apart from reporting requirements, the Contractor, through its site superintendent, may require special assistance. These could be implemented for the following reasons:

- If prevention assistance, and coordination are required, the regional fire department and or the Government of Nunavut Fire Marshall shall be contacted at:

Iqaluit fire department (867) 979-4422
Fire Marshall (Gov. of Nunavut) (867) 975-5300

- If medical assistance and coordination is required, when injuries occurred during fire incident, and/or critical incident stress is observed after an event, the Pond Inlet Health Centre and/or the Baffin Regional Hospital (general enquiries) shall be contacted at:

Pond Inlet Health Center (867) 899-7500
Baffin Regional Hospital (867) 979-7300

Maintenance Duty, Check List and Inspection Logs

Fire Equipment Maintenance Duty

Feature	Duty
Fire Alarm System	AC Power lamp, trouble signal - Check for defects
Exit Lights / Signs	Check to ensure they are not damaged and are illuminated or will illuminate during a power failure.
Window shutters	All window shutters are to be kept in the open position as the window is an emergency escape route.
Electrical Equipment	Ensure all electrical cords, plugs and outlets are in good condition.

	Breakers are disconnected when not in use. Cords are elevated off ground and out of traffic areas.
Fuel Storage	Check to ensure that fuel storage area is protected from vehicular impact.
Kitchen Gas Appliances	Ensure fresh air vents open under range when hood fan is on. Range hood and fans clean. Range, deep fryer, steam table pilot lights operating properly. Check for defects.
Furnaces	Ensure all furnaces operating properly. Check for defects, no storage in alcove, access door in place. Chimneys installed properly. Check for defects.
Carbon Monoxide (CO)	Ensure carbon monoxide monitors are plugged into hallway receptacles near the center of the camp. Function test to ensure they work.
Illumination	All entrance / exit door exterior lights are working. Yard / parking area lighting sufficient and working.



Fire Equipment Maintenance Check list

Date Checked _____

- Fire Alarm System Working () () () () () ()
- Exit Lights / Signs Working () () () () () ()
- Window shutters Open () () () () () ()
- Electrical Equipment Working Safely () () () () () ()
- Fuel Storage no spills () () () () () ()
- Kitchen Gas Appliances Working Safely () () () () () ()
- Furnaces Operating Properly () () () () () ()
- Carbon Monoxide (CO) in place and () () () () () ()
- Yard illuminated properly () () () () () ()

Inspected by (Signature) _____

Mark "\/" for Satisfactory "X" for Unsatisfactory

23. Accident Investigation

Purpose

Accident prevention is the key to eliminating possibility of injury to employees and property losses. Learning from past accidents is one of the key elements in accident prevention.

This chapter addresses the procedures to be followed for all accidents resulting in employee injury or property damage.

Responsibilities

Management

- Conduct accident prevention and investigation training for supervisors
- Ensure all accidents and injuries are investigated
- Ensure immediate and long term corrective actions are taken to prevent re-occurrence
- Maintain Accident Reports permanently on file
- Provide all necessary medical care for injured workers

Employees

- Immediately report all accidents & injuries to their supervisor
- Assist as requested in all accident investigations
- Report all hazardous conditions and near-misses

Supervisor Involvement

In most cases, the site Supervisor (i.e. Department Head) conducts the investigation. Direct supervisors are familiar with employee's work environment & assigned tasks. The Supervisor is the person who must take the accident situation under control and immediately eliminate or control hazards to others.

Immediate Steps

1. Provide First Aid for any injured persons
2. Assess access to area, and if necessary, first eliminate or control hazards
3. Document accident scene information to determine the cause
4. Interview witnesses immediately

Reporting and Appeal Procedure

Accident reporting

Any injury or even a near miss at work must be reported immediately to your supervisor. The supervisor is responsible for ensuring proper procedures are followed with respect to medical attention, investigation and reporting.

Requirements for Reporting

Section 35 of the Safety Regulations (Nunavut) states that

“An employer shall report

(a) immediately, an accident resulting in the death of any employee, occurring at the place of employment, and

(b) an accident of a serious nature involving any employee, occurring at the place of employment, within 24 hours of the accident, to the Chief Safety Officer, Department of Safety and Public Services, Government of the Northwest Territories, Yellowknife, Northwest Territories, 1- 867-873-7468”

As well WSCC further clarifies the Nunavut statutes by applying the NWT General Safety Act where it states:

35. (1) “In this section, “accident of a serious nature” includes

(a) a major structural failure or collapse of a building, bridge, tower, crane, structure, scaffold, temporary construction support system or excavation;

(b) an uncontrolled spill or escape of a toxic or hazardous substance;

(c) an accidental contact with an energized electrical conductor;

(d) a premature or accidental detonation of explosives;

(e) a concussion, major blood loss, serious fracture, unconsciousness or amputation; and

(f) an incident involving heavy equipment.

R-028-93,s.6; R-079-2000,s.3.”

When a report is filed with WSCC all employees involved are required to participate truthfully with their investigation.

* NOTE *

Employees are reminded that all work related injuries, no matter how minor, are to be reported to the Supervisor as soon as possible

Accidents or Dangerous Occurrences

In the event of an accident causing loss of life, or serious injury, or any dangerous occurrence as specified in the Act, the Manager shall;

- Inform Tactical Medical Service's main office in accordance with the current emergency contact list (distributed on each site to management staff).
- Ensure that the accident/incident scene is not disturbed, other than necessary for the treatment of any victims.
- Ensure that an investigation is carried out by persons knowledgeable in the type of work involved, as well as the co-chairpersons of the Safety Committee.

Upon completion of the investigation, the Manager shall prepare a report that;

- Whenever possible, identifies the cause(s) of the accident/incident
- Identifies the unsafe conditions, activities or procedures which contributed, in any manner, to the accident/incident, and
- Includes recommendations to prevent recurrence of similar events.

Copies of the report shall be provided to the Safety Committee and sent to the chief mines inspector as well as the district mines inspector. If required, copies of the report shall also be provided to concerned provincial authorities.

Glossary of Terms

Dangerous occurrence: includes

- cracking or subsidence of a dam or impoundment dike; unexpected seepage or springs on the outer face; washout or significant erosion of a dam or dike which may adversely affect the integrity of the structure
- an outbreak of fire
- a premature or unexpected explosion or ignition
- the occurrence of flammable, noxious or toxic gas in mine workings or at an exploration site
- an explosion or outbreak of fire in any way related to the operation of an air compressor, air receiver, compressed air line or steam boiler
- loss of control or major damage to any mobile equipment
- unexpected major ground fall or subsidence which endangers people or damages equipment
- any other unusual accident, or unexpected event which has the potential for causing serious injury.

Serious injury: includes

- a) a fracture of the skull, spine, pelvis, femur, humerus, fibula, tibia, radius or ulna
- b) an amputation of a major part of a hand or foot
- c) the permanent loss of the sight of an eye
- d) any serious internal hemorrhage
- e) any burn that is caused by electricity and requires medical attention
- f) any third degree burn
- g) any injury caused directly or indirectly by explosives
- h) any asphyxiation or poisoning that causes a partial or total loss of physical control
- i) any other injury likely to endanger life or cause permanent impairment.

Near Miss Investigation

All incidents which have a potential for serious injury or property damage should be investigated by the Superintendent or Supervisor.

Pertinent information should be gathered and a near miss investigation report completed.

Accident Prevention

Accidents are usually complex. An accident may have 10 or more events that can be causes.

A detailed analysis of an accident will normally reveal three cause levels: basic, indirect, and direct. At the lowest level, an accident results only when a person or object receives an amount of energy or hazardous material that cannot be absorbed safely. This energy or hazardous material is the **DIRECT CAUSE** of the accident. The direct cause is usually the result of one or more unsafe acts or unsafe conditions, or both.

Unsafe acts and conditions are the **INDIRECT CAUSES** or symptoms. In turn, indirect causes are usually traceable to poor management policies and decisions, or to personal or environmental factors. These are the **BASIC CAUSES**. In spite of their complexity, most accidents are preventable by eliminating one or more causes.

Accident investigations determine not only what happened, but also how and why. The information gained from these investigations can prevent recurrence of similar or perhaps more disastrous accidents. Accident investigators are interested in each event as well as in the sequence of events that led to an accident. The accident type is also important to the investigator. The recurrence of accidents of a particular type or those with common causes shows areas needing special accident prevention emphasis.

Investigative Procedures

The actual procedures used in a particular investigation depend on the nature and results of the accident. In general, responsible officials will appoint an individual to be in charge of the investigation. The investigator uses most of the following steps:

- Define the scope of the investigation.
- Select the investigators. Assign specific tasks to each (preferably in writing).
- Present a preliminary briefing to the investigating team, including:
 - *a. Description of the accident, with damage estimates.*
 - *b. Normal operating procedures.*
 - *c. Maps (local and general).*
 - *d. Location of the accident site.*
 - *e. List of witnesses.*
 - *f. Events that preceded the accident.*
- Visit the accident site to get updated information.
- Inspect the accident site.
 - *a. Secure the area. Do not disturb the scene unless a hazard exists.*
 - *b. Prepare the necessary sketches and photographs. Label each carefully and keep accurate records.*
- Interview each victim and witness. Also, interview those who were present before the accident and those who arrived at the site shortly after the accident. Keep accurate records of each interview. Use a tape recorder if desired and if approved.
- Determine
 - *a. What was not normal before the accident.*
 - *b. Where the abnormality occurred.*
 - *c. When it was first noted.*
 - *d. How it occurred.*
 - *Analyze the data obtained. Repeat any of the prior steps, if necessary.*
 - *Determine*
 - *a. Why the accident occurred.*
 - *b. A likely sequence of events and probable causes (direct, indirect, basic).*
 - *c. Alternative sequences.*
 - *.*
 - *Determine the most likely sequence of events and the most probable causes.*
 - *Conduct a post-investigation briefing.*
 - *Prepare a summary report, including the recommended actions to prevent a recurrence.*

Distribute the report according to applicable instructions. An investigation is not complete until all data are analyzed and a final report is completed. In practice, the investigative work, data analysis, and report preparation proceed simultaneously over much of the time spent on the investigation.

Fact-Finding

Gather evidence from many sources during an investigation. Get information from witnesses and reports as well as by observation. Interview witnesses as soon as possible after an accident. Inspect the accident site before any changes occur. Take photographs and make sketches of the accident scene. Record all pertinent data on maps. Get copies of all reports. Documents containing normal operating procedures, flow diagrams, maintenance charts, or reports of difficulties or abnormalities are particularly useful. Keep complete and accurate notes in a bound notebook. Record pre-accident conditions, the accident sequence, and post-accident conditions. In addition, document the location of victims, witnesses, machinery, energy sources, and hazardous materials. In some investigations, a particular physical or chemical law, principle, or property may explain a sequence of events. Include laws in the notes taken during the investigation or in the later analysis of data. In addition, gather data during the investigation that may lend itself to analysis by these laws, principles, or properties. An appendix in the final report can include an extended discussion.

Interviews

In general, experienced personnel should conduct interviews. If possible, the team assigned to this task should include an individual with a legal background. In conducting interviews, the team should:

- Appoint a speaker for the group.
- Get preliminary statements as soon as possible from all witnesses.
- Locate the position of each witness on a master chart (including the direction of view).
- Arrange for a convenient time and place to talk to each witness.
- Explain the purpose of the investigation (accident prevention) and put each witness at ease.
- Listen, let each witness speak freely, and be courteous and considerate.
- Take notes without distracting the witness. Use a tape recorder only with consent of the witness.
- Use sketches and diagrams to help the witness.
- Emphasize areas of direct observation. Label hearsay accordingly.
- Be sincere and do not argue with the witness.
- Record the exact words used by the witness to describe each observation. Do not "put words into a witness' mouth."
- Word each question carefully and be sure the witness understands.
- Identify the qualifications of each witness (name, address, occupation, years of experience, etc.).
- Supply each witness with a copy of his or her statements.

Signed statements are desirable. After interviewing all witnesses, the team should analyze each witness' statement. They may wish to re-interview one or more witnesses to confirm or clarify key points. While there may be inconsistencies in witnesses' statements, investigators should



assemble the available testimony into a logical order. Analyze this information along with data from the accident site. Not all people react in the same manner to a particular stimulus. For example, a witness within close proximity to the accident may have an entirely different story from one who saw it at a distance. Some witnesses may also change their stories after they have discussed it with others. The reason for the change may be additional clues.

A witness who has had a traumatic experience may not be able to recall the details of the accident. A witness who has a vested interest in the results of the investigation may offer biased testimony. Finally, eyesight, hearing, reaction time, and the general condition of each witness may affect his or her powers of observation. A witness may omit entire sequences because of a failure to observe them or because their importance was not realized.

Problem Solving Techniques

Accidents represent problems that must be solved through investigations. Several formal procedures exist to solve problems of any degree of complexity. This section discusses two of the most common procedures: Change Analysis and Job Safety Analysis.

Change Analysis

As its name implies, this technique emphasizes change. To solve a problem, an investigator must look for deviations from the norm. Consider all problems to result from some unanticipated change. Make an analysis of the change to determine its causes. Use the following steps in this method:

- Define the problem (What happened?).
- Establish the norm (What should have happened?).
- Identify, locate, and describe the change (What, where, when, to what extent).
- Specify what was and what was not affected.
- Identify the distinctive features of the change.
- List the possible causes.
- Select the most likely causes.

Job Safety Analysis

Job safety analysis (JSA) is part of many existing accident prevention programs. In general, JSA breaks a job into basic steps, and identifies the hazards associated with each step. The JSA also prescribes controls for each hazard. A JSA is a chart listing these steps, hazards, and controls. Review the JSA during the investigation if a JSA has been conducted for the job involved in an accident. Perform a JSA if one is not available. Perform a JSA as a part of the investigation to determine the events and conditions that led to the accident.

Investigation Report



An accident investigation is not complete until a report is prepared and submitted to proper authorities. An accident report should be clear and concise. The purpose of the investigation is to prevent future accidents. The following outline has been found especially useful in developing the information to be included in the formal report:

- Background Information
 - *a. Where and when the accident occurred*
 - *b. Who and what were involved*
 - *c. Operating personnel and other witnesses*
- Account of the Accident (What happened?)
 - *a. Sequence of events*
 - *b. Extent of damage*
 - *c. Accident type*
 - *d. Agency or source (of energy or hazardous material)*
- Discussion (Analysis of the Accident - HOW; WHY)
 - *a. Direct causes (energy sources; hazardous materials)*
 - *b. Indirect causes (unsafe acts and conditions)*
 - *c. Basic causes (management policies; personal or environmental factors)*
- Recommendations (to prevent a recurrence) for immediate and long-term action to remedy:
 - *a. Basic causes*
 - *b. Indirect causes*
 - *c. Direct causes (such as reduced quantities or protective equipment or structures)*

Possible Causes

Obvious accident causes are most probably symptoms of a "root cause" problem. Some examples of Unsafe Acts and Unsafe Conditions which may lead to accidents are:

- Unsafe Acts
- Unauthorized operation of equipment
- Running, Horse Play, Not following procedures, By-passing safety devices
- Not using protective equipment
- Under influence of drugs or alcohol
- Unsafe Conditions
- Ergonomic Hazards
- Environmental hazards Inadequate housekeeping Blocked walkways
- Improper or damaged Personal Protection Equipment (PPE)
- Inadequate machine guarding



Recommendations

As a result of the finding is there a need to make changes to:

- Employee training
- Work Stations Design
- Policies or procedures

Records

All accident reports will be maintained on file permanently. They shall receive timely review by the site Project Management Team to ensure proper corrective actions have been taken. The First Report of Injury form will be completed within 24 hours of notification of injuries or illnesses.



24. Follow-up with Injured Worker and Safe Return to Work

Follow-up with Injured Worker

The TMS project manager will monitor the injured worker's progress and recovery regularly, and consult with the medical personnel and Workers compensation board Case Manager, if the case, in order to determine when the employee can safely return to work.

The injured worker is also responsible to remain in contact and actively collaborate with TMS in order to ensure his/her appropriate reintegration to work.

Safe Return to Work

Once the injured employee obtains medical clearance to return to work in some capacity, the TMS project manager in collaboration with physician, and the employee may consider, among others, the following options that are recognized by the worker's compensation board in order to provide suitable work for the quick and safe return to work of our employees:

- Light Duty - The injured worker is working short term while building his/her strength and tolerance for work following a workplace incident. Duties are altered to match the worker's tolerance level and abilities.
- Modified Duties - The injured worker is working primarily in his/her pre-injury position. The duties are changed and some are removed to accommodate the worker's functional abilities.
- Permanent Alternate Duties - The injured worker may not be able to perform pre-injury duties, but may be able to perform suitable employment or other duties. Hours of work may vary from the pre-injury position depending on the availability of appropriate, meaningful tasks and the worker's skills and abilities.
- Training on the Job - When the injured worker is unable to return to his previous position because of restrictions resulting from the injury, training on the job can provide the injured worker with marketable skills, which can lead to re-employment.

A Transitional Work Agreement will also be signed between the employee and his supervisor. This agreement will document the temporary arrangements made in order to allow the employee to continue to work while recovering from an injury or illness.

25. Emergency Response Procedures

General protocols that shall apply to emergency response procedures shall include:

- Emergency response procedures will be planned and rehearsed in advance of the work activities. Methods and routes of evacuation, as well as liaisons with off-site medical and rescue personnel will be pre-established.
- In the event of an emergency, the following procedures will be implemented:
 - *a) an alarm will be sounded. Different alarms shall be used:*
 - *Bear-in/around-camp:*
 - *Fire, significant spill or other danger or worker in distress. - In addition to the alarm, call will be made on radios. The alarm signals will be made using a whistle or portable horn of 30 Watt*
 - *b) Work in the affected area shall be stopped.*
 - *c) In the case of a bear alarm, the bear monitors will respond. All other personnel will act in a manner consistent with bear avoidance tactics, including moving to a safe location if this can be accomplished without aggravating the situation.*
 - *d) In the case of other alarms, the emergency response / treatment personnel and the nearest supervisor will converge on the area, and other personnel will move to a predetermined safe zone.*
 - *e) Emergency response / treatment personnel will evaluate the incident and implement the necessary action.*
 - *f) A predetermined person (i.e. Site Superintendent or Health and Safety Officer) will coordinate site control which may include:*
 - *moving non-essential personnel to a safe location*
 - *head-count and enforcement of the buddy system*
 - *preparing for extrication and or evacuation, contacting off-site resources.*
 - *g) Fires that can be easily controlled will be extinguished immediately by the nearest trained person(s). Spills will be similarly controlled by the nearest trained person(s), if feasible.*
 - *h) Where the fire (or other emergency) produces a serious and imminent danger (where there is a risk of explosion), everyone will be evacuated to a safe location, if appropriate. Off-site personnel will be contacted.*
- Following an emergency and prior to the commencement of work, there shall be:
 - *a) Notification of regulatory authorities as required*
 - *b) An incident investigation including documentation of the event*
 - *c) A review of work procedures for the purpose of preventing similar events*
 - *d) A review of emergency response plans for the purpose of improvement*
 - *e) A replacement of emergency equipment and supplies where necessary.*
- Off-site emergency resources can be found by contacting the following phone numbers:

Emergency Numbers

Organisation	Phone number
Iqaluit Hospital (medevac and emergency)	(867) 979-7350
Iqaluit Hospital (main office)	(867) 979-7300
RCMP	(867) 979-1111
Iqaluit Fire Department & Ambulance	(867) 979-4422
Iqaluit Airport Fire Department	(867) 979-6608
Iqaluit Public Health Department	(867) 979-5306
Emergency Search and Rescue	(867) 979-5650
Ottawa General Hospital	(613) 737-7777
Marine and Air Search and Rescue	(800) 267-7270
WSCC Iqaluit	(867) 979-8500
Spill Report Line	(867) 920-8130
Canutec Canada	(613) 996-6666
Qikiqtaaluk Medical Iqaluit Office	(866) 576-9040

:

26. Progressive Disciplinary System

Employee who violates client safety requirements or the TMS Health & Safety Program or any rule, procedure, guidance or announcement shall be held accountable for their actions. Violations shall result in investigation and disciplinary action up to and including termination if a wilful violation is found to have taken place. The supervisor is to refer to the TMS Human Resources Policy for specific steps. Generally the guidelines call for:

- First offense – counseling/retraining/written warning
- Second offense – suspension
- Third offense – dismissal

Violation of any of the below rules will not be tolerated on the job and are additional grounds for immediate discipline up to and including dismissal:

- Wilful or repetitive violation of safe work practices
- Reckless use of equipment or vehicles
- Horseplay, practical jokes
- Unnecessary running or jumping or other at risk behaviour
- Being under the influence of drugs or alcohol in route to or during work
- Bringing weapons on the job site
- Failure to report near misses, any / all first aids / medical treatments /non job related injuries or medical problems
- Endangering the safety of yourself and others by failure to report a hazard
- Attempted or actual physical force to cause injury, threatening statements or other actions to cause an Associate to feel they are at risk of injury.

28. Tactical Medical Service Ethics policy

29. Records and Statistics

Purpose

Records and statistics, pertinent to safety shall be compiled and retained by TMS. These records and statistics shall be used to identify and monitor problem areas, review the effectiveness of the Safety and Health Program and provide data to the Supervisors and employee to assist them in their endeavors of providing a safe work place. Key Performance Indicators (KPI) will be used to determine what changes need to be made, to review individual project management success towards Safety and Health published goals and objectives.

Records

Inspection of Vehicles and Machinery

- a) Records shall be kept on the maintenance and repair of each unit.
- b) Maintenance and repair records shall be kept on file by the Manager. Such records shall be readily available, upon request, to provincials' worker's compensation boards.

Investigation of Accidents

Reports of accidents/near miss incidents involving TMS shall be kept on file at the Main Office and made available per Regulations.

Safety Committee

Safety Meetings shall be recorded and kept on file at the Main Office and made available as per Regulations.

Accident Report Forms

Accident Report Forms shall be completed in accordance with Regulations.

Inspection Records

Inspection Reports shall be completed for all inspections and a copy kept on file at the Main Office.



First Aid Record Book

A First Aid treatment record book shall be maintained on site in the TMS site clinic.

Review of Statistics

Records and statistics shall be reviewed by Management and, where necessary, action will be taken to correct safety problems identified during a review.

Key Performance Indicator (KPI) might include but are not limited to:

- Total Injuries (first aids , LTI , Medical aids) x 200,000/hrs
Total Exposure Hours
- Days Away From Work Cases (# days away from work) x 200,000/hrs
Total Exposure Hours
- Total Recordable Injuries/Illness and Incident Rate(# x 200,000/Hrs)
Total Exposure Hours
- Vehicle incidents and property damage or loss
- Reportable spills

30. Workplace Violence and Harassment

The management of TMS recognizes the potential for workplace violence and other aggressive behaviour directed at our employees. We will not tolerate behaviour from anyone that intimidates, threatens, harasses, abuses, injures or otherwise victimizes our employees and will take whatever steps are appropriate to protect our employees from the potential hazards associated with workplace violence. We are committed to providing our employees with an appropriate level of protection from the hazards associated with workplace violence.

Violence and harassment include behaviours such as:

- physical assault or aggression,
- unsolicited and unwelcome conduct, comment, gesture or contact which causes offense or humiliation,
- Physical harm to any individual which creates fear or mistrust, or which compromises and devalues the individual.

Purpose

The purpose of the policy is to ensure that

- individuals are aware of and understand that acts of violence or harassment are considered a serious offence for which necessary action will be imposed;
- those subjected to acts of violence or harassment are encouraged to access any assistance they may require in order to pursue a complaint; and
- individuals are advised of available recourse if they are subjected to, or become aware of, situations involving violence or harassment.

Definitions

Workplace violence and harassment occur in the following categories:

- verbal abuse (emotional/psychological abuse)
- sexual harassment
- physical aggression
- physical assault

Management Responsibilities

Management will:

- Inform employees if they are working in an area where there is a potential for violence and identify any risks that are specific to that area.



- Ensure that appropriate procedures are in place to minimize the risk to our employees from violence.
- Ensure that employees are trained in recognizing and responding to situations involving workplace violence.
- Ensure that every reported incident of workplace violence is investigated, documented and potential areas for improvement identified.

Employee Responsibilities

- Employees of this corporation and its group of companies are required to be familiar with and follow the procedures that are in place to protect them from workplace violence.
- Employees will read Appendix 1 to familiarize themselves with how to recognize and address workplace violence.
- All employees must participate in the instruction of workplace violence prevention.
- Employees are required to immediately report all incidents of workplace violence to their supervisor.
- Employees are also responsible for participating in work site hazard assessments and implementing controls and procedures to eliminate or control the associated hazards.
- Employees are to adhere to the Code of Conduct and rules.

No employee can be penalized, reprimanded or in any way criticized when acting in good faith while following the procedures for addressing situations involving workplace violence.

Recognizing and Dealing with Potentially Violent Situations or Harassment

Stay alert of signs:

Early Warning signs:

- Intimidation, threatens or bullying other staff (often a history of incidents)
- Cannot accept criticism or discipline
- Accepts no responsibility for actions and blames others for their problems
- Harassment of stalking of other staff
- Rigid adherence to their own rules and denigration of others
- Fascination with weapons or acts of extreme violence
- Continuous griping about management and a large number of grievances
- Exhibits low self-esteem, extreme depression or sense of hopelessness.
- Records lateness or increased sick time without apparent cause; monitors or maintains unauthorized files on other worker's habits or behaviours.
- History of abuse It is important that a manager or co-worker recognize these signs and advises the individuals' supervisor and the Corporate Secretary.

Impending Signs:

- Expressions of paranoia/someone or thing is out to get them
- Expresses irrational ideas or beliefs
- Exhibit angry unprovoked outbursts
- Inordinate fascination with weapons and their affect on people
- Starts giving away personal items to staff
- Stops discussing the future and gives impression there is no tomorrow
- Inability to accept any criticism or negative comment
- Keeps talking to coworkers about a plan or action that will make things right or resolve a perceived problem
- Continuously talking about a family or financial duress that cannot go on.

➔ *At this point it is critical to seek advice from professionals.*

Responding to a Physical Attack

- If you are attacked:
- Make a scene, yell or scream as loudly as possible. Try shouting words like STOP, FIRE or HELP. (Yelling FIRE is statistically more likely to get you help because it appears everyone rushes to see fires. Yelling HELP will tell the listener that assistance is required and the response could endanger them as well. Yelling STOP creates noise, which is sometimes a deterrent to completing the attack, though not reliable)
- If you are being pulled along or dragged, fall to the ground and roll.
- Blow a whistle or push the security alarm.
- Give bystanders specific instructions to help you. Single someone out and send them for help. For example, "You in the yellow shirt, call the police. "
- If someone grabs your purse, briefcase or other belongings, DO NOT resist.
- Throw the item to the ground several feet away from the thief and run in the opposite direction, yelling "help" or "fire".
- DO NOT chase a thief.
- Run to the nearest safe place, a safe office or an open store.
- Call security or the police immediately after the incident.
- If the attack does not warrant calling the police, inform your supervisors or the authorities at your workplace.
- File an incident report.

Terminating a Potentially Abusive Interaction

- Interrupt the conversation firmly but politely.
- Tell the person that you:
 - do not like the tone of the conversation
 - will not accept abusive treatment
 - will end the conversation if necessary.
- Tell the person that you will ask them to leave the building, or that you will leave (if working off-site).
- If the behaviour persists, end the conversation.
- Ask the person to leave the building or leave yourself.
- If the person does not agree to leave, remove yourself from the scene and inform your manager or supervisor immediately.



- DO NOT return to the person if you believe they pose a physical threat.
- Advise other staff and have them leave the immediate area.
- Call security or your local police.
- File an incident report.

Appendices



Employee Report of Accident, Injury or Illness

Instructions: Please Print. Fill in all blanks. If a blank does not pertain to your accident, injury or illness write "N/A" in that blank. When completed, return this form to your supervisor.

Name: _____

Social Security Number: _____ Sex _____ Age _____

Address _____ Phone Number _____

Marital Status Single Married Separated Divorced Widowed

of Dependents _____

Employment Start Date	Time in Present Job
Job Title	Supervisor's Name
Department	Date & Time of Accident
Location of Accident	Task being Performed
Name of Witness	Name of Witness
Describe how the accident happened	
What caused the Accident	
What could have prevented this accident	
Date & Time you first sought medical attention	
Name of Hospital or Doctor	
Were you using required safety equipment?	



The information I have provided either in my own writing or verbally for the purpose of this form is true and correct. I

understand that providing false or misleading information or omission of information on this report or any other form

relating to this claim of injury/accident may result in termination of my employment.

Signature of Employee: _____ **Date:** _____

Reader or Interpreter: _____ **Date:** _____

Signature of Witness: _____



Weekly Toolbox Safety Meetings

Company:	Occupation:
Date:	Presenter:

Topic of the Training/Meeting

List of points covered:

Employee Attendance: (Please print and sign)



Supervisor's Report of Accident

Supervisor's Name: _____

Basic Rules for Accident Investigation

- Find the cause to prevent future accidents - Use an unbiased approach during investigation
- Interview witnesses & injured employees at the scene - conduct a walkthrough of the accident
- Conduct interviews in private - Interview one witness at a time.
- Get signed statements from all involved.
- Take photos or make a sketch of the accident scene to accident
- Ensure hazardous conditions are corrected immediately.

Date & Time		Location	
Tasks performed		Witnesses	
Resulted in	__ Injury __ Fatality __ Property Damage	Property Damage	
Injured		Injured	
Describe Accident Facts & Events			
Supervisor's Root Cause Analysis - Check ALL that apply to this accident			
Unsafe Acts		Unsafe Conditions	
Improper work technique		Poor Workstation design	
Safety rule violation		Unsafe Operation Method	
Improper PPE or PPE not used		Improper Maintenance	
Operating without authority		Lack of direct supervision	
Failure to warn or secure		Insufficient Training	
Operating at improper speeds		Lack of experience	
By-passing safety devices		Insufficient knowledge of job	
Protective equipment not in use		Slippery conditions	
Improper loading or placement		Excessive noise	
Improper lifting		Inadequate guarding of hazards	
Servicing machinery in motion		Defective tools/equipment	



Horseplay		Poor housekeeping	
Drug or alcohol use		Insufficient lighting	

Unsafe Acts require a written warning and re-training before the Employee resumes work			
Re-Training Assigned		Unsafe Condition Guarded	
Re-Training Completed		Unsafe Condition Corrected	
Supervisor Signature			

Accident Report Review

Supervisor _____ Date _____

Site Superintendent _____ Date _____

Safety Officer _____ Date _____

Site Engineer _____ Date _____

Management Comments:



Supervisor Safety Inspection

Supervisor _____ Date _____

Area Inspected _____

For items checked "NO", Fill out a Maintenance Work Order. Mark "N/A" for items not applicable to your area

Fire Protection	Yes	No
Fire extinguishers inspected, charged, accessible (3 ft clearance)		
Combustible material removed, stored properly. Flammable material in approved areas		
Exit routes clear & EXIT or NO EXIT signs posted (lighted & visible)		
Evacuation routes are posted		
Storage separation from Walls & Ceiling (18" minimum for sprinklered areas)		
Burn kits and eye wash stations		
Electrical Safety		
Power panels, controls, receptacles & wiring covered. No missing, lose or broken parts		
Electric power cords are not frayed or broken All plugs have 3 prongs		
No extension cords through walls, doors, ceiling, windows, under mats or rugs		
Electric panels are marked to indicate Service & Voltage - 3-foot clearance each side		
Trip-Slip-Fall Hazards		
Drain covers & grates are in good repair and installed		
Walkways are clear of material, cords		
Guardrails, steps are secured. Ladders are in good repair, no missing, lose parts		
Adequate lighting in all areas, including exterior night lighting		

Personal Protection		
Machine guards in place		
Emergency Eye Wash Stations capped, functional, accessible		
Personal Protective Equipment being used		
Good body mechanics (lifting, pushing pulling, range of motion, no twisting)		
Chemical Safety		
All containers are properly labelled with specific hazards and are closed/sealed		
Only the minimum amount needed is in the work area, all others are properly stored		
Ergonomics		
Work equipment in proper order/fit/appropriate for job		
Workers utilizing proper technique		
Lifting / repetitive actions / posture / tool placement		
Work area		
Lighting/ventilation/signage/emergency equipment		

Route to:

Superintendent _____

Safety Officer: _____



New Employee Site Safety Orientation Checklist

Name: _____

Job/Dept Assigned: _____

Immediate Supervisor: _____

MISSION STATEMENT

STAKEHOLDERS

HEALTH AND THE ENVIRONMENT

All project work is to be carried-out in a fashion that minimises health and safety and environmental risks.

SAFETY TOPICS PRESENTED DURING GENERAL NEW EMPLOYEE SITE ORIENTATION

- General Safety Rules & Policies
- Emergency Plans: Routes & Assembly Locations
- Procedures for safety violations, accidents, near-miss

GENERAL SAFETY RULES

- Report all work injuries and illnesses immediately to your supervisor or the camp Health and Safety Officer.
- Report all Unsafe Acts or Unsafe Conditions to your Supervisor.
- Use helmet with ATVs. Speed limits are 5 km/hr in camp, and 30 km/hr on the roads.
- Use, possession, sale or being under the influence of illegal drugs, misuse of prescription drugs and/or alcohol is not permitted on site, at any time.
- Only authorized and trained Employees may repair or adjust machinery and equipment. Lock and Tag Out Procedures must be followed before removing any machine guards or working on powered machinery and equipment. Replace all guards when the job is completed.
- Only qualified and certified Employees may work on or near Exposed Energized Electrical Parts or Electrical Equipment. Follow Electrical Safety Rules when working with electrically powered machinery and equipment.



- Only authorized and trained Employees may dispense or use chemicals. All employees that handle chemicals must have completed the site “Workplace Hazardous Material Information System” (WHMIS) course.
- Keep work areas clean and aisles clear. Do not block emergency exits and equipment.
- Wear and use the prescribed Personal Protective Safety Equipment. This includes foot protection, head protection, gloves, etc.
- Smoking is permitted only in the designated "Smoking Areas".
- Attendance to toolbox meetings is compulsory.



CAMP RULES

- Hard hats shall be worn in all designated areas and in all construction or demolition areas.
- EXCEPTIONS INCLUDE: inside cabs of vehicles, helicopter landing pad, and main camp area. Helmets shall be worn while operating ATV's outside the main camp area. No passengers allowed on ATV's.
- Safety glasses shall be worn during or when in vicinity of the following work tasks: plumbing, grinding, cutting, pipe fitting, greasing and inspection heavy equipment, carpentry work, mechanical work, while using cleaning agents or chemicals, demolition and incineration.
- Gloves shall be worn for chemicals and other hazardous materials such as sharp or rough surfaces.
- Steel or composites-toed boots shall be worn at all work sites.
- Use of ATV's requires permission from you supervisor.
- Smoking is not permitted at, in, or near: Aircrafts; Fuel reservoirs, Kitchen; Dining Room; Office; Engineer's Lab; while refuelling any equipment; while handling hazardous waste; while in bed.
- The possession, usage, consumption or sale of alcohol is strictly prohibited at the camp. Offenders will be dismissed.
- All staff is expected to follow good housekeeping practices. Clean as you go.
- Unauthorized personnel shall not enter contaminated zones.
- All incidents/accidents/injuries/near misses shall be reported to your supervisor or to: Site Superintendent or Site Safety Officer or Site Medical Officer.
- All workers are to stop work if they are unsure about proper procedures to follow and check with their supervisors.
- No one shall operate power tools or equipment before they are familiar with correct operating and safety procedures. Tools shall be returned to their proper place upon completion of work or the end of the day.
- No loud noise after curfew in sleeping quarters.
- Be bear aware! Use the buddy system when you venture around the camp area and notify bear monitor.
- ATV excursions require a bear monitor and hourly radio checks and permission from Site Superintendent.
- Please refer to the site Superintendent for job and supervisor assignments.
- Polar bears frequent the area and although they are fun to observe they should never be approached.
- Polar bear sightings should be reported by radio immediately and observers should take cover in vehicles or buildings.
- Never venture out of camp on foot alone.
- Bear monitors will be provided for workers where applicable.
- Stay alert and always look around!



SPECIFIC SAFETY RULES

- I am aware that safety programs are in place for the following tasks and topics - such programs shall be reviewed and verified by the site Safety Officer, or designate prior to working in such an area or on such a task:

Hazardous Waste Operations	Personal Protection Equipment
Polar Bears and Firearms	Respiratory Protection
Vehicle Safety	Hazard Communication & Chemical Safety
ATV Safety	Flammable Liquid
Demolition Activities	Housekeeping & Material Storage
Excavation/Construction Requirements	Welding Safety
Tool Safety	Forklift Safety
Lock and Tag-out Procedures	Electrical Safety
Fall Prevention	Waste Hydrocarbon Incineration

- I am aware that copies of the Health and Safety Program where all Safety plans described are available on site.
- I am aware that the Health and Safety Officer is responsible for the overall conduct of the Safety programs on site.
- I am aware that I shall comply with all camp rules and safety requirements.
- I understand that failure to follow the above rules may cause serious injury and/or illness. Disciplinary Action, up to and including Termination, will be used to assure rule enforcement.

Please use common sense and think before you act. If you are not sure how to complete a job or task safely or have any questions, ask your supervisor.

Employee's Signature _____

Trainer Signature _____

Date _____



Employee Site Safety Orientation Checklist

Records for management

Name: _____

Job/Dept Assigned: _____

I have reviewed the Mary River Camp Rules and general policies and I intend to comply with them.

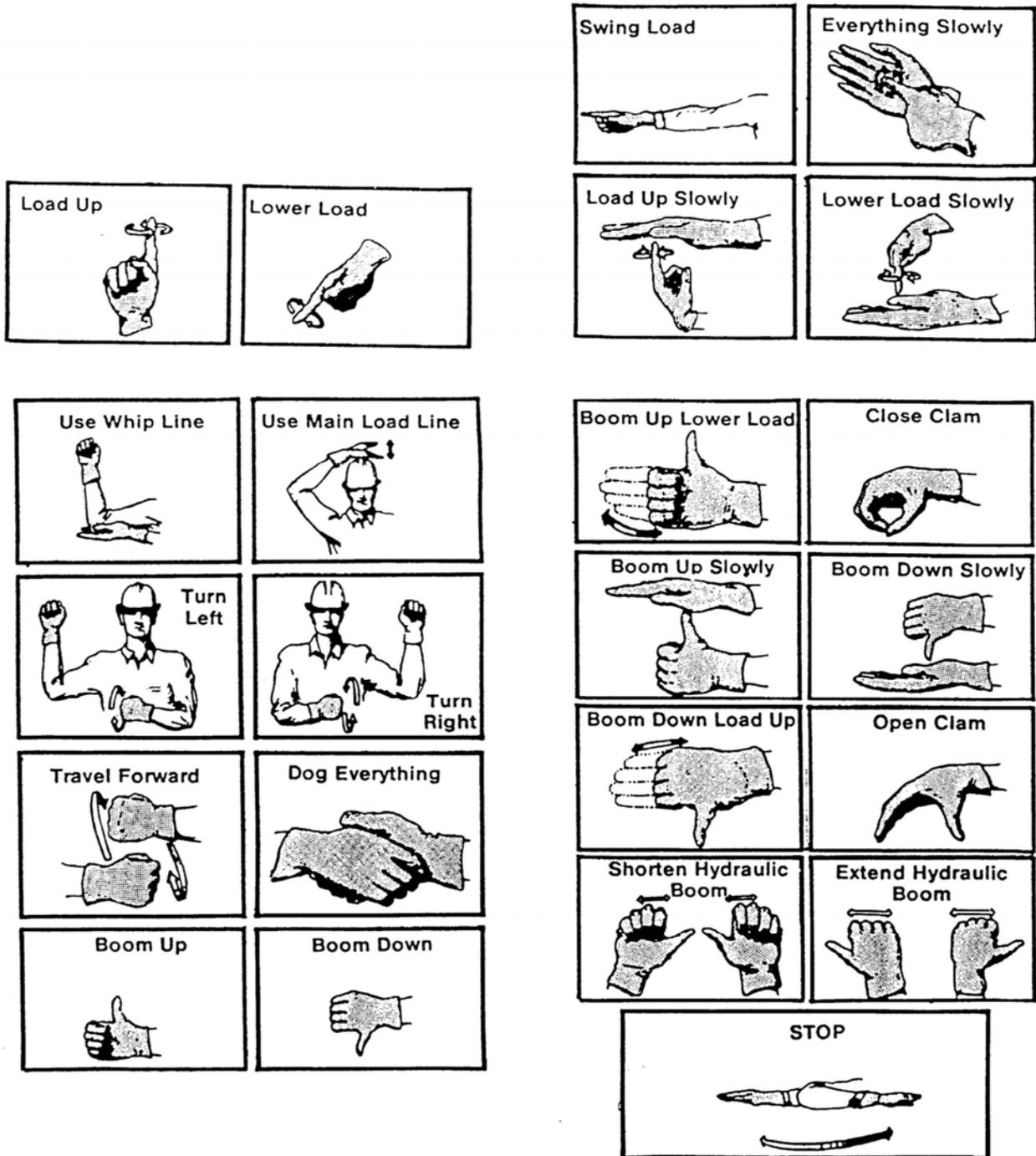
Employee's Signature _____

Trainer Signature _____

Date _____

File this form in the Employee's Personnel Record

Hand Signals



Polar Bear Awareness



The Nature of Bears

Description

The polar bear's strength is awesome. It can easily kill a 250kg seal with a single blow of its paw, and even a 60kg cub is more powerful than any human being. The polar bear is capable of sudden bursts of speed which can quickly outdistance any person. Polar bears are expert swimmers and divers, and have been sighted in open water many kilometers from shore. Like other bears, the polar bear has a remarkable sense of smell that can lead it to a source of food many kilometres away. Its hearing is also well-

developed, and its eyesight is thought to be comparable to a human's.

Disposing of Garbage



Improper garbage disposal is another major cause of bear problems. Bears are strongly attracted to garbage and will be drawn to your camp if you do not take care to eliminate all garbage and associated smells.

General Conduct

Safety is everyone's responsibility; it is not a job which can be delegated to someone else and then forgotten about. The actions of each individual either contribute to or detract from the safety of

everyone else. Remember these simple rules:

Have a plan of action for dealing with bears and be sure everyone understands it.

Do not leave camp alone.

Never approach a bear for any reason. Photographs should be taken from a safe distance with a telephoto lens (zoom lens).



Deterrents

Every person who works or travels in bear country should have ready access to some means of deterring or chasing away a bear. A deterrent may get you out of a tight situation safely-without the need to shoot a bear.

Noise - Warning shots and noisemakers are commonly used deterrents. However, they are not always effective. They scare some bears, but others ignore them. Make sure these devices explode between you and the bear, as an explosion behind the bear could scare it toward you. Cracker shells (or warning shots) should never be fired directly at a bear. Shoot in the air to one side of the animal. A wounded bear is very dangerous.

Limitation - Do not let access to a deterrent make you overconfident in an encounter or less careful to avoid bear problems. No deterrent is completely effective against every bear in every situation. Carry back-up firearm just in case.



Encountering a Bear

Behaviour - Every bear defends a "critical space". The extent of the space may vary with each bear and each situation: it may be a few metres or a hundred metres. Intrusion within this space is considered a threat and may provoke an attack.

All female bears aggressively defend their cubs. If a female with cubs is surprised at close range, or separated from her cubs, she is likely to attack.

A bear that is threatened may engage in "displays" intended to scare away an opponent. These may include huffing, panting, hissing or growling; looking directly at you, sometimes with lowered head and ears laid back; or charging to

within several metres, then stopping suddenly or veering to the side. Threat displays may be followed by an attack, but many ends with the bear walking or running away.

A bear standing on its hind legs is probably trying to pick up your scent and figure out what you are. It may sniff the air or swing its head from side to side. Bears do not charge on their hind legs.



Reacting to a Bear

Though the thought of facing a bear may be frightening, it should be remembered that bears rarely attack a person on sight, and only a very small percentage of attacks result in serious injury or death.

Try to stay calm and assess the situation.

Do not run from a bear unless you are sure you can reach a safe place before the bear catches up. Running may cause the bear to chase you, and a bear is faster than you are.

If you see a bear at a distance while hiking, try to leave unnoticed. Quality walk back the way you came or make a wide detour around the bear. If that is not possible or if the bear is approaching, get out of sight and wait for the bear to leave. Keep an eye on the bear and stay downwind. Make sure you do not come between a bear and its cubs.

Always leave a bear an open avenue of escape.

If the bear is aware of you, help it identify you as a person. It may leave. Stay upwind if possible. Talk in low tones and slowly wave your arms.

If time and circumstances permit, try to scare the bear away by firing warning shots, flare cartridges or noisemakers, or by chasing it with a vehicle.

In a close encounter, act as non-threatening as possible. Do not shout or make sudden movements which might provoke the bear and avoid direct eye contact. At 50 metres, even if the bear is displaying “threat” behaviour, there is probably still time for you to avoid an encounter. Back away slowly, leaving behind an article of clothing or gear to distract the bear. Leave food only as a last resort.

If the bear is very close (30m), it is usually best to stand your ground. Be prepared to shoot if you are carrying a firearm.

If a Bear Charges

A bear charges at high speed on all four legs. Many charges are bluffs. Bears often stop or veer to the side at the last minute. However, if contact appears unavoidable, you will have to shoot to kill.

Shooting a Bear- The “right” moment for you to squeeze the trigger depends on your experience and confidence with a firearm, how fast the bear is approaching, and your nerve. The decision can be made only by the person facing the bear, and must be made quickly. Keep in mind that an accurate shot fired at close range has a greater chance of killing a bear than one fired farther away. The first shot is the most important. If you must kill a bear, aim for the front shoulder if the bear is broadside, or the back of the neck between the shoulders if the bear is facing you.



If You are Unarmed

Make every attempt to protect your vital organs. Drop to the ground and lie on your side, curled into a ball with your legs drawn to your chest and your head buried in your knees. Clasp your hands behind your neck. Keep your legs tightly together. Try to stay in this position even if moved. Try not to resist or struggle as it may intensify the attack. If an injury may be reduced or prevented by keeping still.

Need More Information?

If you require more information about polar bear awareness or research, please contact:

Department of Sustainable
Development

Government of Nunavut

P.O. Box 1870

Iqaluit, NT X0A 0H0

Ph: (867) 979-5011

Fax: (867) 979-6791



If a bear shows signs that it considers you prey, and you do not have a gun, do not play dead. Act aggressively and defend yourself with whatever means available. You want to appear dominant and frighten the bear. Jump up and down, shout, wave your arms. Fight back. It may help to raise your jacket or pack to make you look bigger.

Remember: this does not apply in situations when you have surprised a bear at close range and it is defending its critical space, its cubs or its food.

Preventive Maintenance Checklist - Heavy Equipment

Equipment Description: _____

Model: _____ Make: _____

Serial Number: _____

Type: _____ Year: _____

Maintenance Interval Schedule

PM 1 - 250 Hours or Monthly

PM 2 - 500 Hours or 3 Months

PM 3 - 1000 Hours or 6 Months

PM 4 - 2000 or 1 year

PM 5 - 3000 or 2 years

PM - 1	PM - 2	PM - 3	PM - 4	PM - 5	TASK
#					Change final drive oil
#					Replace hydraulic oil filter
#					Change swing drive oil
#					Clean air conditioner condenser
#					Inspect/replace/adjust - belts
#					Add - cooling system coolant additive
#					Inspect cooling system hoses
#					Obtain engine oil sample
#					Change oil and filter
#					Check final drive oil
#					Obtain final drive oil sample
#					Clean/inspect/replace fuel system primary filter
#					Inspect fuel system priming pump
#					Replace fuel system water separator element
#					Obtain hydraulic system oil sample
#					Lubricate swing bearing
	#				Clean engine crankcase breather

	#				Replace fuel system secondary filter
	#				Clean fuel tank cap and strainer
	#				Replace hydraulic system oil filter
		#			Check Battery electrolyte level
		#			Clean engine governor oil supply screen
		#			Check engine valve lash
		#			Change cooling system coolant

Preventive Maintenance Checklist - Light Equipment

Make of Vehicle: _____ Type: _____

Year: _____ Model: _____ Capacity: _____

Type of Engine: _____ Serial #: _____

Body Serial #: _____

PM - 1 Every 200 hours

PM - 2 Every 1200 hours

PM 1	PM 2	TASK
		ENGINE LUBRICATION CHECK
	#	Wash and clean engine
#	#	Drain engine, refill crankcase with recommended grade oil
#	#	Replace oil filter/cartridge
		CHASSIS LUBRICATION CHECK
#	#	Complete lubrication; check all fluid levels as per manufacturer's recommendation, steering gear, and rear axle, transmission and brakes/clutch master cylinder reservoir. Check battery and tire pressure.
		ENGINE CHECK
#	#	Check drive belt
#	#	Inspect air cleaner piping for signs of leakage or loose mounting
#	#	Clean/replace air cleaner element
#	#	Replace fuel filter, inspect for leaks
#		Test compression: 1 2 3 4 5 6 7 8
#	#	Service crankcase ventilation system
	#	Check ignition system and adjust/replace spark plugs
	#	Check injectors
	#	Record engine oil pressure at high idle, using oil gauge; PSI
#	#	Check radiator and fan shroud for damage or obstruction
#	#	Check coolant with anti-freeze tester/coolant level
	#	Inspect water pump bearing for looseness
	#	Inspect motor mounts
	#	Run computer diagnostic check (F.R.E.D.)
#	#	Visually inspect fuel system pump and injectors for leakage
	#	Check turbo-charger condition, check for excessive smoke - diesel engines only
		ELECTRICAL CHECK

#	#	Clean and inspect battery terminals, cables, hold down bracket
	#	Inspect electrical wiring for proper routing, clamping, deterioration
#	#	Check lights, signals, reflectors, back-up alarm
	#	Perform cranking motor test
	#	Check charging rate, record output volts
#	#	Check block heater, battery heater
		BRAKE SYSTEM
#	#	Inspect brake lines, fitting for signs of kinking and leakage
	#	Inspect disc brake cables and levers and adjust operations
	#	Remove all wheels, inspect linings, brake drum and wheel cylinders. Clean, inspect and re-pack bearings.
		STEERING SYSTEM
	#	Inspect ball-joints for wear, check adjustment of steering stop
#	#	Inspect drag-link, pitman arm, tie rod ends, steering box for looseness
#	#	Inspect steering column U-joint, splines for wear and looseness
	#	Check toe-in and front-end alignment
#	#	Inspect front wheel bearing for looseness, rear wheel bearing on front end drive
		TRANSMISSION/DIFFERENTIAL
#	#	Clean breather on 4x4 models, check extension tubes
	#	Check transmission modulator valve for internal leaks
#	#	Inspect transmission and differential mounting for looseness and deterioration
#	#	Inspect transmission and differential pinion flange for looseness
#	#	Inspect drive shaft, U-joints, spline section, center bearing for looseness and wear
	#	Change automatic transmission oil and filter
#	#	Check front wheel drive axle boots and constant velocity joints
		CHASSIS SECTION CHECK
#	#	Inspect exhaust system for leakage, looseness and proper wear
#	#	Inspect fuel tanks, mounting and straps
	#	Inspect cab mount
#	#	Check front/rear springs, shacklers, shocks and frame for looseness and wear
	#	Inspect cross member, stabilizer brackets, torque arm and equalizers for looseness and wear
	#	Check front and rear U-bolts
		WHEEL, AXLE, HUB AND TIRES
#	#	Check tires for cuts, wear and matching
#	#	Check front steering seals and locking hubs

		BODY AND CAB
#	#	Inspect interior/exterior condition of vehicle for damage/seatbelt
#	#	Check operation of instruments, gauges, in- board computers, shift quadrant indicators
#	#	Inspect windshield wiper arm, blades, washer
#	#	Inspect glass and mirror mounting, check window regulators, door striker plates
#	#	Lubricate hood and door latches, hinges, and door locks
#	#	Check operation of air conditioner, heater and defroster
		EMERGENCY EQUIPMENT
#	#	Check first aid kit and fire extinguisher, report if missing or damage
#	#	Complete PM sticker, record meter reading for next PM inspection
		ROAD TEST INSPECTION
#	#	Check steering for effort, shimmy or pulling
#	#	Check braking action and operation
#	#	Check clutch, brake and transmission controls for proper operation
#	#	Check for unusual noise or vibration
#	#	Check speedometer and hour meter operation
#	#	Check operating temperature
		ADDITIONAL WORK IDENTIFIED DURING INSPECTION

Vehicle Preventive Maintenance - All Terrain Vehicles

Equipment Description: _____

Model: _____ Make: _____

Serial #: _____

Type: _____ Year: _____

Maintenance and Lubrication Schedule	Good Condition	Needs Attention	Not Applicable
Every 6 months of service			
Check clutch operation: adjust if necessary			
Check for wheel damage and runout			
Check wheel bearings for looseness or damage			
Check steering system operation			
Check front wheel toe-in			
Check rear suspension operation			
Check all chassis bolts and nuts for tightness			

Maintenance and Lubrication Schedule (cont'd)	Good Condition	Needs Attention	Not Applicable
Every 1 year of service			
Perform all items under Every 6months of service			
Replace oil filter			
Remove and clean carbon from muffler baffle			
Clean engine oil strainer at crankcase drain plug			
Change final drive unit gear oil			
Change transfer case gear oil (4-wheel drive)			
Check constant velocity rubber boots for damage			

Maintenance and Lubrication Schedule (cont'd)	Good Condition	Needs Attention	Not Applicable
Every 2 years of service			
Change brake fluid			

Maintenance and Lubrication Schedule (cont'd)	Good Condition	Needs Attention	Not Applicable
Every 4 years of service			
Replace all brake hoses			
Replace all fuel hoses			

Date: _____

Checked by: _____

Vehicle Preventive Maintenance - Power Unit Daily Inspection

Power Unit Daily Inspection

Unit #: _____

Name of Personnel: _____

- | | |
|---|----------------------|
| x | Needs Attention |
| ✓ | Performs to Standard |
| - | Not Applicable |

ID #	Component Date	Component Description	Date:				Comments
			Check 1	Check 2	Check 3	Check 4	
A	Engines		Time:	Time:	Time:	Time:	
1	1350	Coolant Temperature					
2	N/A	Oil Temperature					
3	N/A	Hour Meter					
4	N/A	Oil Level					
5	N/A	Coolant Level					
6	N/A	R.P.M.					
7	1318	Oil Pressure					
8	N/A	Fuel Pressure					
9	1000	Engine Operation					
10	N/A	Belt Tension					
11	N/A	Leaks (Oil, Coolant)					

ID #	Component Date	Component Description	Date:				Comments
			Check 1	Check 2	Check 3	Check 4	
C	Panel		Time:	Time:	Time:	Time:	
1	7468	Voltmeter					
2	7471	Frequency Meter (Hz)					
3	7467	Phase A (Amps)					
4	7467	Phase B (Amps)					
5	7467	Phase C (Amps)					

6	7467	Phase N (Amps)					
---	------	----------------	--	--	--	--	--

Date: _____

Checked by: _____

Field Inspection Report on Vehicles

Make of Vehicle: _____

Type: _____

Year: _____ Model: _____

Capacity: _____

Type of Engine: _____ Serial #: _____

Body Serial #: _____

Accessories: _____

Cab, Body - Condition:

a) Cab: _____

b) Doors: _____

c) Hood or Trunk: _____

d) Fenders: _____

e) Grills: _____

f) Bumpers: _____

g) Box or Deck: _____

h) Seats, Floor Mats: _____

i) Instrument Panel: _____

j) Mirrors: _____

k) Paint: _____

l) Decals and Dept. Numbers _____

m) Problems Occurred: _____

Chassis, Suspension - Condition:

a) Frame: _____

b) Springs, Shackles, Pins _____

c) Front Axle: _____

d) Shocks: _____

e) Wheels: _____

f) Tires: _____

g) Tire Inflation: _____

h) Steering Gear Box: _____

i) Tie Rod Ends, Drag Links: _____

j) Problems Occurred: _____

Brake Systems - Hydraulic or Air - Condition

a) Adjustment: _____

b) Fluid Levels: _____

c) Breathers or Filters: _____

d) Operations: _____

Hand or Emergency Brake - Condition

a) Adjustment: _____

b) Operation: _____

c) Problems Occurred: _____

Electrical Systems - Condition

a) Battery: _____

b) Starter System: _____

c) Charging System: _____

d) Lights: _____

e) Horn, Wipers, Etc.: _____

f) Problems Occurred: _____

Fuel and Exhaust System - Condition

a) Radiator: _____

b) Shutters: _____

c) Exhaust System: _____

d) Problems Occurred: _____

Cooling System - Condition

- a) Radiator: _____
- b) Shutters: _____
- c) Fan: _____
- d) Belts, Hoses: _____
- e) Heater; _____
- f) Problems Occurred: _____
- _____
- _____

Power Train - Condition

- 1
- a) Engine and Components: _____
 - b) Compression Test: _____
 - c) Noises: _____
 - d) Operation: _____
 - e) Mileage or Hours: _____
 - f) Problems Occurred: _____

- 2
- a) Clutch Linkage: _____
 - b) Adjustment: _____
 - c) Operation: _____
 - d) Problems Occurred: _____

- 3
- a) Transmission or Transfer Cases: _____
 - b) Noises: _____
 - c) Operation: _____
 - d) Problems Occurred: _____

- 4
- a) Drive Line: _____
 - b) U-Joints, Phased: _____
 - c) Centre Bearing: _____
 - d) Problems Occurred: _____

- 5
- a) Transfer Case-
 - i) Back Lash: _____
 - ii) Noises: _____

iii) Operations: _____

iv) Problems Occurred: _____

b) Differential - Rear

i) Back lash: _____

ii) Noises: _____

iii) Seals: _____

iv) Operations: _____

v) Problems Occurred: _____

c) Differential - Front

i) Back Lash: _____

ii) Noises: _____

iii) Seals: _____

iv) Operation: _____

v) Problems Occurred: _____

Accessories or Attachments:

a) PTO, Hydraulic Pumps: _____

b) Hoist: _____

c) Crane: _____

d) Other Equipment mounted on vehicle: _____

e) Parts Books: _____

f) Repair Manual: _____

g) Operations Manual: _____

h) Special Tools required for repair or servicing: _____

Other Comments: _____

Inspected by: _____ Date: _____

Environmental / Spill Report

DATE: _____ TIME: _____

1. Who first noticed the spill or release? _____
2. Who was notified? _____
3. What is the chemical name of the substance or process solution which was released? (If a cyanide solution was released what was the pH and CN concentration)

4. When did the spill or release start (date, time)? _____
5. When did the spill or release end (date, time)? _____
6. Where was the substance released from (attach sketch or marked-up map)? _____
7. Where did the substance travel (attach sketch or marked-up map)? _____
8. How much of the substance was spilled or released? (How did you determine the amount?)

9. What was the concentration of the substance (assays, log sheets, etc.)? Please attach source of data.

10. What caused the spill or release? _____

11. What actions were taken to respond to and contain the spill or release? _____

12. What actions were taken to clean-up the spill or release? _____

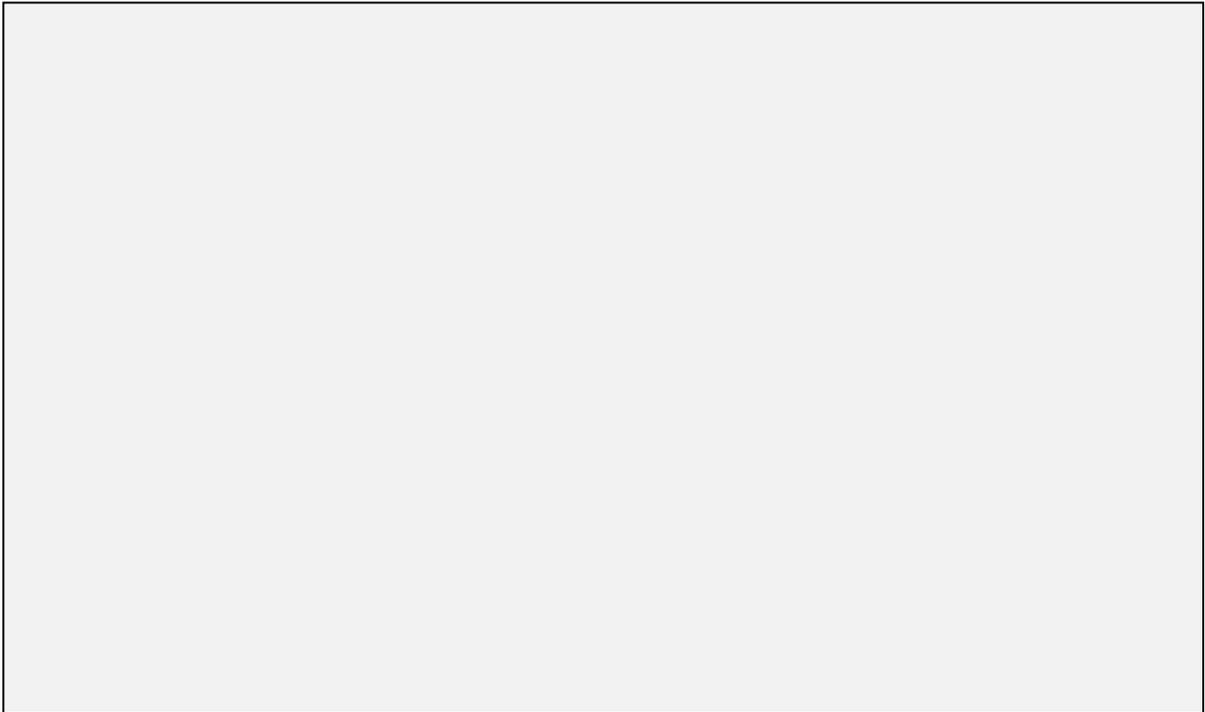
13. How much material was removed or excavated? _____

14. Where was the clean-up material placed? _____

15. What mitigation measures were taken to ensure this type of release will not occur again?

16. Were there any injuries or property damage? _____

Sketches for No. 6 and 7



Name

Signature

Date

Transitional Work Agreement

This Transitional Work Agreement is to document the temporary arrangements made in order to allow the employee named below to continue to work while recovering from an injury or illness. The purpose of this agreement is to facilitate recovery, prevent deterioration of work skills, and return the employee to work as soon as medically possible. The agreements made in this plan were reached through an interactive discussion between the employee and supervisor. These agreements were made to accommodate the temporary work restrictions provided by the employee 's treating physician.

Attached, please find medical documentation stating these work restrictions.

All parties understand that they need to strictly adhere to these work restrictions.

Employee: _____ Department: _____

Job Title: _____ Supervisor: _____

Transitional work assignment details (use additional pages as necessary):

This Transitional Work Agreement will be from _____ to _____ (please specify dates).

This Transitional Work Agreement will be reviewed with the employee and updated, if necessary, on the following date: _____ (e.g., midpoint date).

Employee confirms that he/she received a copy of the Employee Information Sheet

It is understood that these are temporary arrangements designed to allow employees to continue to work while recovering from illness or injury. This Transitional Work Agreement does NOT represent a permanent change of duties or responsibilities. It is understood that any problems that may arise during this transitional work period shall be discussed between the supervisor and employee.

Employee Signature: _____ Date: _____

Supervisor Signature: _____ Date: _____

Job Safety Training Checklist

Name of the employee: _____

Job Title: _____

Tasks description:

Appropriate Safety Training needed for the job:

- | | | |
|--------------------------|----------|----|
| <input type="checkbox"/> | Training | 1: |
| <hr/> | | |
| <input type="checkbox"/> | Training | 2: |
| <hr/> | | |
| <input type="checkbox"/> | Training | 3: |
| <hr/> | | |
| <input type="checkbox"/> | Training | 4: |
| <hr/> | | |
| <input type="checkbox"/> | Training | 5: |
| <hr/> | | |
| <input type="checkbox"/> | Training | 6: |
| <hr/> | | |
| <input type="checkbox"/> | Training | 7: |
| <hr/> | | |

Please use common sense and think before you act. If you are not sure how to complete a job or task safely or have any questions, ask your supervisor.

Employee's Signature _____

Trainer Signature _____

Date _____

File this form in the Employee's Personnel Record

Glossary of Terms

General guide in performing a repair and replacement or adjustment of a component identified through PM Checklist.

Attachments:	Vehicle coupling system, fifth wheel, fifth wheel plate, pintle hooks, Clevis connection, tow hooks, draw bars, power tail gate, platform, mounting hardware, winch, wiring, mounting hardware, winch assembly, hoisting devices, mounting hardware, all cables including crane cables, boom, links, pins.
Brakes:	Brake shoes, pads, drums, rotors, wheel cylinders, callipers, brake chambers, master cylinders, lines, compressor, brake control valve systems, slack adjuster and dryer.
Bulldozer Blades Front:	End loader buckets and cherry picker buckets.
Cab/Body:	Exterior, sheet metal, wiper blades, wiper arms, mirrors, reflectors, glass, seats, interior equipment, instrument gauge, warning device, heater core, hoses, ductwork, fire extinguisher, flares, moldboard, blades, brackets.
Cooling System:	Radiators, surge tank, shutters, shutter controls, fan and shroud, thermostat and housing, hoses, and water pump.
Differential:	Drive axle, axle housing, axle shaft, differential flange, electric two- speed shift.
Electrical:	Generator/Alternator, voltage regulator, related wiring harness, starter motor, wires, cables, battery, ignition switch, coil, condenser, rotor, selector, spark plug, all wiring, transistor ignition system, bulbs, switches and wiring harnesses.
Engine Block:	V-belts, emission controls, PCV valves, air pump and thermal reactors.
Engine:	Air intake system, intake manifold, air cleaners, turbochargers, blowers and superchargers.
Exhaust System:	Exhaust manifold, heat riser, exhaust pipe, muffler, tail pipe, gaskets, clamps, supports and catalytic converters.
Frame:	Structural members, bumpers, engine and body mounts and necessary mounts for attaching components.
Fuel System:	Fuel tanks, lines, pumps, filters, carburetor or fuel injectors and controls.
Hydraulic System:	Hydraulic controls, control valves on backhoes, front-end loaders etc. pump cylinder, piston, fluid reservoirs, tank, hydraulic lines, fittings, hoses. (Reservoir to the pump and to the components), hydraulic motors, circle drivers, winches, hydraulic system on attachment, brush cutters, snow blower, dump box system, plow & wing system, cranes, hoisting devices, sanders, power tail gate assemblies, outrigger systems. Hydraulic system on specialized equipment, pavement burners, centerline markers, hydro seeders, garbage packers, self-propelled brooms and chill spreaders.
Outrigger/Stabilizer:	structural frame, supporting components.
Snow Equipment:	Wings, blades, plows, blowers, mounting hardware, sanders, mower blades, trenchers, augers, backhoe assembly, cutting edges and teeth.

- Steering:** Steering wheel assembly, steering gear assembly, idler arm, pitman arm, tie rod end, tie rod adjusters, king pin assembly, ball joint assembly.
- Suspension:** Suspension brackets and bushing necessary for attaching the suspension to the frame, shock absorbers, springs and non-drive axles.
- Transmission:** Case, cover, all internal parts and controls, drive shafts, universal joints, support bearing, auxiliary transmission or transfer case, internal parts and controls, power take-off.