THE UNDERHILL GROUP
HEALTH, SAFETY AND ENVIRONMENTAL MANUAL

DOCUMENT CONTROL AND ISSUE FOR THE HEALTH, SAFETY AND ENVIRONMENTAL PLAN

This document is to be maintained, issued to staff, and updated by the Health & Safety Officer.

The Health & Safety Officer will update this document annually or after acquisition of equipment or development of new procedures.

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Table of Contents

1 HEALTH AND SAFETY POLICY

The UNDERHILL GROUP is committed to a healthy, safe and environmentally sound program that will protect our staff and property as well as other workers who enter onto our property, the general public, and the environment.

All employees are responsible and accountable for the company's health and safety performance. Proactive participation by every employee, on an ongoing basis, in every job, is necessary for the level of safety excellence this company expects.

Management will set an example and provide leadership in the health and safety program. Management, with employee involvement, will set a health and safety policy and provide work procedures that will establish a safe work environment. All work procedures will be provided to employees as well as the proper equipment and training necessary to get the job done safely.

The UNDERHILL GROUP is an alcohol and drug free work environment; all employees are expected to follow the drug and alcohol policies.

All employees will have an awareness of the health and safety concerns of their fellow workers. Employees are encouraged to work towards continuously improving health and safety conditions at work. All employees must be familiar with the requirements of the appropriate jurisdictional legislation.

The UNDERHILL GROUP’s goal is for all employees to work in a healthy and injury free work place.

All policies in this manual have been reviewed and approved by the Managing Partner of this office.

Signed: _____ Dated: _____

Managing Partner

2 APPLICABLE LEGISLATION

All applicable Occupational Health, Safety, Environmental, and Worker's Compensation Legislation must be followed. Examples of pertinent legislation are:

2.1 Territorial Legislation

Yukon Occupational Health and Safety Regulations (YWCHSB)
http://www.wcb.yk.ca/ActsPoliciesAndRegulations/Default.aspx
Yukon Environmental & Socio-economic Assessment Act (YESAA)
http://www.yesab.ca/act_regulations/
Workplace Hazardous Materials Information System Regulations (WHMIS)
http://www.ccohs.ca/oshanswers/legisl/intro_whmis.html

2.2 Provincial Legislation

WorkSafeBC Occupational Health and Safety Regulations
http://www.worksafebc.com/regulation_and_policy/default.asp
Workers Compensation Act
http://www.worksafebc.com/regulation_and_policy/default.asp
BC Environmental Management Act (EMA)
http://www.bclaws.ca/
Workplace Hazardous Materials Information System Regulations (WHMIS)
http://www2.worksafebc.com/Topics/WHMIS/Home.asp

2.3 Federal Legislation

Explosives Act
http://laws.justice.gc.ca/en/E-17/index.html
Transportation of Dangerous Goods Act and Regulations (TDG)
http://www.tc.gc.ca/eng/tdg/clear-menu-497.htm
Energy Resources Conservation Boards Regulations
http://www.ercb.ca/docs/requirements/actsregs/erc_act.pdf
National Fire Code of Canada Prevention Act
http://www.nrc-cnrc.gc.ca/eng/ibp/irc/codes/05-national-fire-code.html

All Occupational Health & Safety Regulations and Acts will be available in company trucks and offices. Other Legislation will be available in the main offices and by request.

3 ORGANIZATIONAL STRUCTURE

1. OWNERS/PARTNERS (MANAGERS)

2. HEALTH & SAFETY OFFICER/SAFETY COMMITTEE

3. PARTY CHIEFS

4. CREWS

5. OFFICE STAFF

3.1 Safety Responsibilities And Accountability

3.1.1 Owners/Partners

- Insistence of safe and competent performance by all employees
- Implement, maintain, and update safety program
- Ensure safety program and operations comply with legislation and contractual requirements
- Provide sufficient time for employees and contractors to do jobs properly
- Hire individuals who have good safety records and competent job performance records
- If not, train new and inexperienced personnel in all aspects of the job, including health & safety
- Set an example of expectations and standards
- Provide a healthy and safe workplace
- Provide resources to correct unsafe conditions
- Have all incidents/accidents investigated
- Review all safety reports and make sure recommendations are implemented
- Ensure employees are properly trained
- Verify employee competency
- Ensure that Personal Protective Equipment is available and used
- Ensure that first aid equipment and supplies are available

3.1.2 Health & Safety Officer

- Insistence of safe and competent performance by all employees
- Implement, maintain, and update safety program and this manual
- Ensure safety program and operations comply with legislation and contractual requirements
- Have all incidents/accidents investigated and recommendations implemented
- Report all lost-time and medical aid injuries promptly to WCB

- Ensure employees are properly trained, including themselves, with safety seminars or training
- Maintain current knowledge of safety literature, legislation and codes of practice
- Post all safety bulletins, safety posters, safety rules, meeting minutes and applicable legislation
- Ensure that Personal Protective Equipment is available
- Ensure that first aid equipment and supplies are available
- Conduct regular inspections
- Review incident reports and stay informed about project and company safety performance

3.1.3 Party and Crew Chiefs

The Party Chief is the Underhill staff member who supervises the crews and is in charge of the entirety of the remote field activity or project. The Crew Chief is the person who is directly in control of and participates in the defined practical fieldwork occurring. In some instances this role may merge with the Party Chief role (who plans and organizes the work).

They must:

- Set a good example
- Promote safety awareness
- Enforce safety rules
- Establish safe work procedures
- Correct unsafe work practices and conditions
- Instruct staff in safe work practices
- Verify worker competency for work assigned
- Inspect all worksites and equipment daily and fill out proper forms
- Investigate all incidents/accidents
- Ensure proper maintenance of equipment, tools and work site
- Comply with all legislative regulations
- Ensure that visitors to job sites are properly instructed as to safety requirements and their responsibilities

3.1.4 Crews

- Set a good example
- Use safe work practices & procedures
- Participate in worksite and equipment inspections
- Help nspect all worksites and equipment daily
- Report unsafe acts and conditions to Party Chief/management
- Correct unsafe conditions
- Comply with all applicable rules and regulations
- Report any injury or incident to Party Chief/management
- Make safety suggestions
- Attend safety meetings

- Cooperate with Party Chiefs and management through involvement in all aspects of the health and safety program

3.1.5 Office Staff

- Set a good example
- Use safe work practices and procedures
- Report unsafe acts and conditions to management
- Correct unsafe conditions
- Comply with all applicable rules and regulations
- Report any injury or incident to management
- Make safety suggestions
- Attend safety meetings
- Cooperate with Party management through involvement in all aspects of the health and safety program
- Ensure that visitors to the office are properly instructed as to our safety requirements and their responsibilities

4 MANAGEMENT OF CHANGE

4.1 Change control for the scope of operation:

A managing partner of The UNDERHILL GROUP will be the approving authority for changes to be made to the role, operating mode or operating environment of crews or vehicles.

4.2 Change control for standards & procedures:

The procedure and approving authority, above Crew Management Level, for changes to either general or project specific procedures or minimum standards will be through the safety officer and a managing partner.

4.3 Personnel Control:

A managing partner is responsible for removal or replacement of personnel involved in the project.

4.4 Equipment Change Control Procedure:

All modification or exchange of equipment employed on the project is through the company's managing partner and equipment manager.

5 ENVIRONMENTAL PROTECTION POLICY

The UNDERHILL GROUP understands the mobilization of survey crews can have a damaging effect on the environment having seen first-hand the impact off-road vehicles and personnel can have on the land. For example, All Terrain Vehicle (ATV) tracks on the unchanging tundra of the Arctic can last for decades. Therefore, it is the UNDERHILL GROUP's policy to avoid, minimize and mitigate damage to the environment whenever possible.

Excessive off-road driving, spilling contaminates, contaminating water sources, and unnecessary destruction of vegetation is prohibited. Further, any violation of environmental laws is strictly forbidden for all UNDERHILL GROUP employees. As a minimum standard, all environmental laws pertaining to a particular jurisdiction must be adhered to. These environmental laws include, but are not limited to:

Yukon Environmental & Socio-economic Assessment Act (YESAA)
http://www.yesab.ca/act_regulations/documents/YESAAACTBillC-2.pdf

BC Environmental Management Act (EMA)
http://www.env.gov.bc.ca/epd/main/ema.htm

The Canadian Environmental Protection Act (CEPA)
http://www.ec.gc.ca/ceparegistry/the_act/default.cfm

The UNDERHILL GROUP will endeavour to keep its impact on the environment to a minimum. This will include:

- Keeping ATV off-road use to a minimum. When in use, employees will drive, if possible, only in or on available, established corridors. These include: roads, trails, pipelines, transmission right-of-ways and pre-existing cutlines - unless otherwise directed by the client and allowable by regulations;
- Using helicopters, float planes, boats, postponing work to the winter to allow the use of skidoos or even just walking instead of using ATVs to lessen our environmental impact;
- Avoid utilizing potentially damaging tundra tire equipped Twin Otter planes on soft ground; use float planes as an alternative
- Avoiding cutting down trees unnecessarily when line cutting;
- Keeping the number of helicopter pads to a minimum and as small as safety protocols allow;
- Keeping survey sightlines and GPS windows as small as possible;
- Following procedures for the use of fuel or oil for ATVs and chainsaws, ie. not filling saws or ATVs within 100m of a waterbody. Note: Spills of hydrocarbons or chemicals must be immediately reported to the site Party Chief and appropriate action must be taken.
- When utilizing a camp, minimizing the environmental footprint with the "Pack it in, pack it out" mentality in mind when pitching and striking the camp

6 TRAINING, EDUCATION AND INSTRUCTION POLICY

6.1 Orientation For New Employees

New employees of the UNDERHILL GROUP will receive familiarization with the company's health and safety procedures as well as other training programs available to its employees on or before their first day of work. New employees will sign an Employee Statement Of Understanding as a permanent record of their orientation. Orientation subjects will include the following:

- Standard work procedures and safe work practices
- Location of first aid and other emergency facilities
- Procedure for reporting incidents/accidents and hazardous conditions
- Recognition and review of existing worksite hazards
- Mandatory compliance requirements with company expectations and WCB legislation
- The use and care of personal protective equipment required on worksites
- Workers are informed of the company's policies and procedures on workplace violence as stated in the Underhill Health and Safety Environmental Manual

6.1.1 Short Service Employees And New Hires Policy

Most employees at Underhill are full-time permanent employees, but occasionally seasonal work creates the need for temporary Short Service Employees. All employees must be orientated with the Underhill safety policy, and special consideration is in effect for the worker who may not be familiar with all of the potential hazards on a site. Short Service Employees and new hires are defined as having worked with the company for less than 6 months. Short Service Employees (SSE) are identified, appropriately supervised, trained, mentored, and managed in order to prevent accidents such as personal injury, injury to others, environmental damage, or property damage. Underhill does not use sub-contractors, and so assumes no responsibility for any Short Service Employees who are not Underhill employees.

The policy ensures that:

- A crew may contain only one Short Service Employees. Work crews are always at least 2 crewmembers, and this ensures that a Short Service Employees will never be working alone.
- Prior to starting work, the contractor shall notify the client if Short Service Employees will be used.
- Short Service Employees will wear pink hard hats to indicate their unfamiliarity and this colour coding system will be communicated with the client.
- Short Service Employees will be mentored by experienced crewmembers to monitor their progress, and after working for 6 months and showing a good understanding of safety, the Short Service Employees will switch to using a regular hard hat, and will be treated as a regular employee.

6.2 Training

The UNDERHILL GROUP will ensure that all employees and Party Chiefs receive training and instruction required to maintain a safe and healthy workplace. Employees will receive instruction in maintaining safe and healthy work practices consistent with the Yukon and WorkSafeBC's Occupational Health and Safety Act and Regulations.

Level 1 Occupational First Aid certification will be a minimum requirement for all UNDERHILL GROUP employees working in the field.

Employees will be encouraged to get annual hearing test certification by a hearing tester authorized by WCB.

Employees shall be instructed in requirements for personal protection. Safety footwear and hard hats are required at all worksites. Employees shall be instructed in requirements for hearing protection, eye protection, and other PPE, as required for specific tasks.

Employees are required to attend project safety meetings and courses scheduled by the UNDERHILL GROUP. This company encourages all employees to participate in safety and health programs deemed mutually beneficial to the employee and company.

The UNDERHILL GROUP will maintain a record of each employee's training, education, and certification. Records will be periodically reviewed to ensure the need for retraining has not been overlooked.

The UNDERHILL GROUP will ensure that all Party Chiefs receive training appropriate to their assigned duties and will maintain records of all training provided by the UNDERHILL GROUP as well as records of training provided by other agencies.

7 PERSONAL PROTECTIVE EQUIPMENT POLICY

It is the policy of this company that all workers use the proper Personal Protective Equipment when and where required. The following will be observed and practiced by the company and employees when the company undertakes any job or contract.

- All employees will wear CSA approved Personal Protective Equipment (PPE) required for the job site or the work being done
- Selection of 'specialized' PPE will be determined by the appropriate safe work practice or procedure, or by management or party chief
- All PPE used by this company will be within the requirements of OH&S legislation and CSA standards
- All PPE used by this company will be maintained in accordance with manufacturer's instructions and requirements
- Company-issued PPE will be inspected at the time of issue and before each use by the employee using the PPE
- All PPE that is of questionable reliability, damaged, or in need of service or repair will be removed from service immediately
- The company will maintain appropriate inspection and service logs and records for SPECIALTY PPE
- No piece of PPE will be modified or changed contrary to its manufacturer's instructions or specifications or OH&S Legislation
- Part Chiefs review the PPE Policy on a peer-to–peer basis and train field workers to understand the issues in maintaining PPE in good condition.

8 INSPECTION POLICY

This company will maintain a program of safety inspections at all facilities and job sites.

8.1 Responsibilities

The UNDERHILL GROUP is responsible for the overall operation of the program.

The senior partners are responsible for reviewing inspection documents and making suggestions for any changes that are required based on advice provided by the health and safety officer.

The health and safety officer is responsible for conducting formal inspections and advising the senior management of any OH&S Regulations that are not complied with.

The Party Chiefs are responsible for conducting informal inspections on worksites that they control and for involving workers in such inspections.

Workers are responsible for participating in and contributing to the inspection program by inspecting equipment and worksites daily.

9 INVESTIGATION POLICY

The following types of incidents shall be fully investigated:

- Accidents that result in injuries requiring medical aid.
- Accidents that cause property damage or interrupt operations with potential loss.
- Incidents that have the potential to result in (1) or (2) above, such as near misses.
- All incidents that fall under Section 30 of the OH&S Act must be reported to OH&S and to WCB or other regulatory agencies as defined by the OH&S Act.

9.1 Responsibilities

- All employees shall report all incidents as soon as possible to their immediate Party Chief and assist in the investigation when requested.
- Party Chiefs shall conduct initial investigations and submit their report(s) to their Health and Safety Officer promptly.
- The Health and Safety Officer shall determine the need for, and if necessary shall direct, detailed investigations. They shall also determine causes, recommend corrective action, and report to the Managers.
- The Managing Partners shall review all Health and Safety Officer reports, determine the corrective action to be taken, and ensure that such action is implemented.

10 EMERGENCY RESPONSE PLANNING POLICY

10.1 Policy

The UNDERHILL GROUP is committed to its operation procedures while protecting the health and safety of the public, its employees and the environment.

10.2 Purpose

Emergency response planning is a high priority with the UNDERHILL GROUP.

This company's emergency response planning process and related training will ensure a timely and appropriate response to any system upset.

This company's emergency response plans will comply with all applicable laws and codes.

10.3 Emergency Response Planning Coordination

Emergency response planning coordination activities will be coordinated by the safety officer and managers at all company facilities, and by the Party Chiefs for activities outside the company's property.

The company will work with any prime contractors in the development of site specific ERP's.

10.4 Responsibility

The safety officer and managing partner are responsible for the compliance of the company with the emergency response planning policy.

In B.C., the managing partner will receive all reports on ERP practice, exercises, and on any system upsets classed as a level 2 or level 3 emergency as determined by the OH& S regulations.

11 EMERGENCY REPSONSE PLAN

In order to be thoroughly prepared for an emergency event, the company will have a plan in place that will identify and list all types of potential disasters.

In the event of an emergency, the employees shall remove themselves and fellow employees from immediate danger, activate the alarm system, call 911 and inform the nearest Party Chief or safety officer.

11.1 Building Evacuation Procedures

On occasion you may, without notice, be asked to evacuate the building. The reasons for this could be fire alarms, bomb threats, natural gas leaks, etc. When you are notified to evacuate, follow these procedures:

1. Anytime an evacuation order is issued, either by alarm or verbally, **YOU MUST EVACUATE IMMEDIATELY!**
2. Note the exit route posted in your work area.
3. Close all windows and doors and walk to the nearest exit. If the alarm stops sounding, continue evacuation and warn others who may attempt to enter the building.
4. Assist disabled persons or visitors leaving the building.
5. Proceed to other buildings or stand 100 feet away from building to the designated meeting area. Keep the streets and sidewalks open for emergency personnel. Do not return to the building until directed to do so by Emergency Personnel or your managing partner. The silencing of audible sirens or horns does **NOT** mean it is safe to re-enter the building.

DO:

- Leave immediately
- Walk, don't run.
- When instructed, evacuate and go a safe distance from your building (pre-designate assembly points for your building).
- If you know of hazards or trapped persons, tell the nearest Emergency Personnel.
- Do not re-enter the building until the police or emergency management personnel tell you it is safe.

DO NOT:

- Use elevators
- Re-enter buildings

11.2 Emergency Procedures for Secluded Worksites

From time to time throughout the construction season, Underhill embarks to secluded sites outside of urban areas. Because of the distance and the lack of proper hospital facilities at some of these remote sites Underhill employees should be aware of special procedures required in the case of an accident.

In the field, the Party Chief must assess the situation for the potential for harm to people, property, equipment and the environment.

The Party Chief must know how, or who, can provide first aid to the injured, transportation to medical aid station, provide initial attack fire fighting, if possible, and what outside agencies to contact for assistance.

These procedures are to be developed thoroughly through safety meetings involving all employees, including new employees. During safety meetings it will be determined what specific safety (emergency) training is required and for whom, based on first aid regulations under the OH&S Act.

A copy of the ERP, including an evacuation plan for the site, will be posted in a clearly visible location. The evacuation plan posted shall include a safety zone in the event of a fire.

All emergency equipment for field crews and main office, such as first aid kits, fire extinguishers, water hoses, emergency showers, emergency lighting, etc., will be supplied as per OH&S Regulations.

All emergency equipment will be inspected on a regular basis.

The UNDERHILL GROUP shall ensure that the following conditions prevail at their sites:

- Proper First Aid equipment, records and transportation are on site
- Communications shall be as good as reasonably possible
- Emergency Procedures in the case of an accident are in place and familiar
- Party Chiefs shall be supplied with the phone numbers for the closest Medical Facilities within the area (see the back of this manual for a list)

11.2.1 Procedure

If an accident does occur on the job site, the following procedures shall be followed;

- Ensure that the injured person is removed from any life threatening situations where further injury to the victim or rescue personnel could be incurred
- The victim shall be stabilized and readied for transportation
- In the case of a non-life threatening situation, the victim shall be transported to the nearest hospital or nursing station
- In the case of a life threatening or serious injuries situation the nearest ambulance service should be notified and transportation should continue to meet up with the incoming ambulance
- Upon the removal of the victim to the hospital or nursing station, the Party Chief shall contact the Yukon WCB/ WorkSafeBC at their 24hour toll-free phone number (1-800-661-0443/ 1-888-621-7233) and commence an investigation into the cause of the accident. The Party Chief shall also contact the Health & Safety Officer and Managing Partner with details of the accident.

- The incident report should be completed immediately and forwarded to the Health & Safety Officer

11.3 Emergency Fire Response Procedure

- Identify the location if it is safe to do so.
- Call **FIRE** as loudly as possible, at least three times and sound fire alarm.
- Have all personnel evacuate the work area or building using the fire evacuation procedure through the nearest exit or escape route. If evacuating a building make sure the windows and doors behind you are closed, but not locked, and all electrical equipment and lights are switched off. Personnel are not to return to the building for any reason.
- Meet at a designated area and ensure that all workers on duty at the time of the fire are accounted for; the Crew Chief will then assign duties to personnel as required.
- Regardless of the fire size, call or designate one person to call the Fire Department and report back with confirmation or notification.
- Have a designated fire team use fire extinguishers only to their level of training or if there is no chance of injury or death.
- Meet Fire Department personnel at the nearest road access and direct them to the fire. Advise the Crew Captain of electrical, boiler, gas or mechanical equipment locations. Draw his attention to the location of dangerous chemicals, gases (propane tanks, oxy-acetylene), flammable (fuel, gasoline), tanks, pressured equipment and lines.
- Shut down machinery as required. Cut off gas and fuel supplier if necessary. Cut off main electrical power supply if necessary.
- Maintain liaison with utility company and electrical system staff.
- Protect equipment, machinery, boilers and lines from elements.
- Secure scene of fire and company property from further damage or loss by unauthorized access of outsiders and curious onlookers.
- A post-fire inventory is to be taken by an internal auditor and the Safety Supervisor.

This is a generic Fire Escape Plan. Every worksite and office building should establish their own fire escape plan/procedure complete with drawings of a planned escape route. This should be posted where all employees can see.

11.4 EMERGENCY PHONE NUMBERS

11.4.1(Whitehorse Area):

(Community Numbers will be listed at the back of this manual)

Fire:	911
Forest Fire:	1-800-798-3473 (FIRE)
Search & Rescue:	1-800-567-5111 (cell: *311)
Police & Ambulance:	911
Environment:	1-867-667-7244 (For spills and other environmental emergencies)
Underhill Main Office:	867-668-2048

11.4.2 (Burnaby Area):

Fire:	911
Police & Ambulance:	911
Environment:	1-800-663-3456 (For spills and other environmental emergencies)
Underhill Burnaby Office:	604-732-3384

11.4.3 (Kamloops Area):

Fire:	911
Police & Ambulance:	911
Environment:	1-800-663-3456 (For spills and other environmental emergencies)
Underhill Kamloops Office	250-372-8835

12 REPORTS AND DOCUMENTATION

The UNDERHILL GROUP maintains records and documentation for both the purposes of due diligence and in order to take a proactive role in the management of our Health, Safety and Environmental plan. The following records will be kept for minimum of 3 years:

- This Company Safety Manual
- Copies of hazard assessments (filed by date)
- Copies of safe work practices and procedures (filed by date)
- Training records (filed by date in employee file)
- Preventative maintenance records (filed by date in equipment folder)
- Safety and worksite inspection records (filed by date)
- Completed Incident investigation policy (filed by date)
- Minutes of safety meetings and documented tailgate meetings (filed by date)
- Program records and statistics (i.e. frequency, severity, claims costs)
- Internal and external safety audits (filed by date)
- First aid and other safety training records (filed by date)

These records provide ready reference to program activities and results. They provide the information necessary to assess the program, to make necessary modifications and to plan for future activities. Program records and statistics will be analyzed yearly in an attempt to determine trends, implement recommendations, and to ensure all employee records are up to date.

13 COMPLIANCE PROCEDURES

The UNDERHILL GROUP expects that all employees will follow all company and government safety and environmental rules. Safety rules are enforced first through proper supervision, leadership and communication of all rules and procedures, and, through disciplinary measures that will be taken against those who fail to comply. The company's disciplinary program is designed to be proactive in that it includes skill development, retraining and commendations, as well as punitive action when required. The company will ensure that all employees are fully informed of company policy, procedures, safe work practices, and relevant government regulations by:

- providing all employees access to all health and safety information
- posting WCB and OH&S regulatory information and updates to regulations
- holding regular safety meetings and tailgate meetings
- training employees as required

14 SAFETY ENFORCMENT POLICY

The management of the UNDERHILL GROUP is committed to the safety of its employees. All employees are to abide by the regulations, safety rules, and the use of safe work practices and safe job procedures.

Safety violations will be handled in an objective but firm manner. The enforcement progression is as follows:

- A documented verbal warning from management, Party Chief or safety officer, then;
- A written warning will be issued from management or safety officer, finally;
- Dismissal by the management.

15 HAZARD IDENTIFICATION

It is the policy of the UNDERHILL GROUP to perform hazard assessments at the commencement of a new job and when new hazards are identified due to a process change, change in procedure, or any circumstance where the company is unfamiliar with an existing process.

Hazard assessments will be performed during the worksite inspection by the Party Chief and their crew and will be recorded on the appropriate worksite inspection and job hazard assessment form which will be then reviewed and assessed by the Safety Officer and Management. Part Chiefs review the Site Evaluation Process on a peer-to–peer basis and train field workers to understand the issues in hazard identification.

Assessments are based on visual inspections of the site as well as tailgate meetings with site supervisors. Hazards are ranked on probability and severity specific to that site.

When an unsafe condition is identified, corrective actions must be implemented prior to work commencing.

15.1 Hazard Mitigation

Identified hazards are mitigated on site each day using the Daily Safety Checklist and the Worksite Inspection forms. Initial visits to a worksite involve identifying potential hazards, and ranking the hazard by probability of occurrence and severity. A copy of the Worksite Inspection form is kept with the job file, which is taken to the work site, so that each crew returning to the worksite will have access to that information directly.
Identified hazards are mitigated by workers using established Safe Work Procedures.

When crews return to sites visited previously, they identify any new hazards that were not in effect on their previous visits. These new hazards are documented in a new Worksite Inspection form that is also kept with the original Worksite Inspection form in the job file taken to the worksite on each visit. By updating the Worksite Inspection forms when a new hazard is identified, workers can be sure that they have access to the most current data regarding safety on a particular site.

15.2 Hazard Mitigation Review

As most of the work that Underhill carries out experiences the same kinds of hazards, there is no real need to keep updating the Safe Work Procedures.
Any hazards that are identified that do not have established Safe Work Procedures will have an ad-hoc Safe Work Procedure created for that site and time, and the Safety Officer will be notified.
These new hazards will then be discussed at the next safety meeting, and the Safety Committee will introduce changes to the Safe Work Procedures, ensuring that the new Safe Work

Procedures do not create any new hazards.. These new safe Work Procedures will be added to the Underhill Manual, and all workers will be notified of these changes to the Safe Work Procedures.

16 SAFE WORK PRACTICES & SAFE JOB PROCEDURES

Safe work practices and procedures will identify the materials and equipment needed, as well as step-by-step instructions for completing all hazardous tasks.

The UNDERHILL GROUP safe work practices will include:

- Regulatory requirements
- Personal protective equipment requirements
- Responsibilities of each person associated with the job
- A specific sequence of steps to follow to complete work safely

Safe job procedures will be prepared for jobs that:

- Are critical
- Are hazardous and where accidents occur frequently
- Are new or have been changed
- Have had new equipment added
- Require many detailed tasks
- Are done infrequently
- Involve two or more workers who must perform specific tasks simultaneously

Practices and procedures found to be cumbersome or ineffective are to be reviewed as soon as is practical.

17 SAFE WORK PRACTICES

The following information constitutes the company's minimum standards, and will be deemed acceptable unless specified in a contractual agreement.

17.1 Office Safety

Underhill is committed to protecting workers from injuries associated with an office environment and to ensure employees are aware of the potential and existing hazards in that environment.

Office managers are responsible to facilitate and/or provide proper instruction to their workers on protection requirements and training.

WORKER RESPONSIBILITY:

- Read the emergency evacuation procedure
- Inspect all electrical cords to see they are in good condition and are not overloaded
- Adjust computer monitors to correct height and keep clean
- Use fans/space heaters to manufactures specifications
- Clear clutter from floors and aisles
- Use only one filing cabinet drawer at a time and close the drawer when not in use
- Ensure the proper type of fire extinguisher is available and inspect them regularly
- When transporting materials of a heavy nature, use handcarts and trolleys as instructed by manufacturer
- Maintain photocopier and plotters according to manufacturer's specifications.
- Inspect chairs to make sure they are in good repair
- Repair rugs that have tripping hazards
- Tie back all loose clothing and long hair when using paper shredder

Changing Plotter Toner

Equipment Required	Material Required	PPE
Plotter	New Toner Canister	Latex Gloves
	Plastic Bag	Respiratory Mask
	Wet Paper Towel	Safety Gloves

Sequence of Steps:

1. Ensure PPE is in proper working condition.
2. Prepare moistened paper towel.
3. Remove any jewelry, dangling clothes; tie back long hair.
4. Put on PPE.

5. Remove old toner canister as per plotter specific instructions (located on plotter)
6. Place removed canister in plastic bag.
7. Install new toner canister as per plotter specific instructions (located on plotter)
8. If spill occurs clean area with moistened towel.
9. If exposed on skin, wash with soap and cold water.
10. Place bag containing old toner canister in garbage receptacle.

17.2 Rural and Remote Field Work Guidelines

RURAL FIELD WORK is defined as any approved practical work carried out by employees in places more than 5 km outside urban areas. This work covers very diverse activities including but not confined to Land Claim surveys, field camps, mining surveys, oil and gas surveys, remote legal surveys etc. *Voluntary and leisure activities not forming part of the defined and approved practical work are excluded*.

REMOTE FIELD WORK includes all Rural Field Work but is further defined in terms of distance and accessibility:

- Working more than 10 km from a facility with telephone or radio communications;
  In areas of little traffic, on waterways, or where hills, dense vegetation or other topographic features make it difficult to obtain help using the communication system available; and

- If medical or other emergency support is more than 60 minutes away.

OFF-ROAD is any location other than a major or minor formed road

The Party Chief in charge of a rural and or remote field activity must ensure that the risks associated with rural and remote field activities are managed effectively.

To do this they must:

- determine the possible hazards that may be encountered during the activity;
- assess the risks associated with the possible hazards;
- incorporate strategies to minimize the risks to safety and health.
- ensure that the responsibilities for safety and health are communicated to all participants;
- provide appropriate information, instruction and training to all participants.

Many of the hazards likely to be encountered on field activities and appropriate risk controls are discussed in these procedures. Hazard identification and risk assessment forms are included to assist.

The Party Chief can delegate the supervision or training of an employee to a suitably qualified and/or experienced person, as appropriate for the task. The Party Chief is, however, responsible for ensuring that each participant has received appropriate training and has gained sufficient competence to undertake the task.

The Crew Chief is in charge of the practical undertaking of rural and or remote fieldwork has a particular responsibility for safeguarding the safety and health of all staff in their charge as well as any volunteers who may be assisting.

Crew Chiefs of rural and remote field activities must:

- ensure that safe working practices are developed and maintained at all times;
- arrange for participants to be instructed in safe and healthy working procedures;
- ensure that participants are warned about hazards, and how to avoid, eliminate or minimize them; and
- ensure that participants under their control use safety equipment provided in the correct manner.

17.3 Check in Procedure

Underhill has taken steps to ensure employees have multiple means of communication in case of an accident and for check in purposes. Party Chiefs are equipped with Iridium satellite phones, cell phones, two-way radios as well as emergency GPS locators.

Parties must notify a specified contact person (e.g., their Party Chief) on return from field activity, determined in advance of that day's work, at a pre-arranged time. If a party member fails to return from a field activity at the pre-arranged time and has not notified a change in arrangements, the specified contact person is responsible for notifying the managing partner. This person is then responsible for notifying emergency services as applicable and next of kin.

17.4 Working Alone

This is not a standard practice. Underhill will make every effort to avoid this situation. The only time this situation is allowed is when the personal safety of the individual is not at risk in any way.

Situations that are never allowed are:

- in the bush alone, walking in the bush to and from a work site
- lack of communication
- cold weather, poor weather
- helicopter drop off

In the event that the working alone is permitted, Party Chiefs must ensure that:

- The worker is well briefed on his duties, what is required of him and what equipment will be required
- There is hazard identification, minimization and communication to the worker
- The worker is instructed on what to do if they injure themselves and an emergency response plan put in place
- There is an effective means of communication available
- A system of checks with the party chief or a co-worker at one hour intervals is put in place

17.5 Vehicles and Driving

The use of seat belts by all occupants in road vehicles is mandatory. All drivers shall be in possession of a valid driver's license for the appropriate category of vehicle. A Driver's Abstract and copy of the driver's license shall be provided to the Office Manager or Administrative Assistant.

All drivers shall obey all laws and speed limits. All damage to vehicles and infractions on the driver's license shall be promptly reported. There shall be no unauthorized usage. The company should ensure that all vehicles are fitted with the appropriate safety equipment. The vehicles should be kept in a clean, orderly manner. All vehicles carrying fuel, chemicals, explosives or any product designated under the "Dangerous Goods Regulations" shall be labeled appropriately.

Due to recent legislation passed in B.C. cell phone use is restricted to voice activated or 'One touch' hands free devices in company vehicles. Programming of GPS navigation and satellite radios and phones is discouraged while driving.

Backup beepers are required for busy urban areas and on industrial worksites. Underhill vehicles are supplied with beepers that have on/off switches for this purpose.

The following instructions apply when driving to a location:

- Ensure your supervisor or someone at the office knows your intended location, the project or job you are working on, your estimated time of departure and arrival, and applicable cell phone number, etc.
- Before leaving the office/shop for a trip, site visit or inspection, make sure your vehicle is in good operating condition, all emergency supplies are in the vehicle and the vehicle communication devices are all working
- Make sure you are properly dressed for the project or job and that you have sufficient food and water supply for the entire trip
- Ensure your supervisor has the correct, updated contact and/or family telephone numbers.
- Follow the Check in Procedure, especially if your trip, location, or overall plans have changed significantly

General Driving Recommendations:

- Avoid backing up if possible. If you must backup, do circle checks of the vehicle and use a guide
- No cell phone use while driving, pull over or use a hands free device (see section 17.7 below for more information)
- Always drive with your headlights on

17.6 Trailers and Towed Equipment

All employees need to be aware of the following for proper trailer and towed equipment use:

- Party or Crew Chiefs shall verify that operators are capable and qualified on each type of equipment before allowing the equipment to be operated unsupervised
- Operators shall perform a pre-operational check of their equipment. Be familiar with the operator's manual
- Report needed repairs promptly
- Do not use any equipment that is unsafe
- Operators shall perform a visual and manual check of the securing devices to ensure that they are secure before the truck and attachment are put to use
- Make sure cargo is properly loaded and secured using only approved chain and load binders. Safety chains are to be used on any attachment in tow
- Ensure that the chains are of the proper strength for the load and are properly secured to both the vehicle and attachment to be towed
- Be aware of height and width of load
- Never load a trailer beyond its rated capacity
- Do not allow anyone between truck and trailer when backing to hook trailer
- Plan ahead to minimize the need for backing. Always do a walk around to the rear before backing and use an observer when available. Make sure back-up alarms are working properly
- Make sure trailer-bed and ramps are clear of any debris
- Make sure ramps are secure before putting trailer in use
- Hook, unhook, load and unload on stable ground with trailer secure
- Be sure taillights and turn signals are in view when towing any attachment that does not have taillight hookup
- Observe towing speed limit if applicable
- Operators shall be responsible for securing permits for all oversize loads

Hooking Up A Trailer

Things You'll Need:

- Truck/Car
- Hitch (proper class-check towing sites for application)
- trailer

1. Before starting anything with trailer or vehicle do a visual inspection of both and check all bolts/nuts on wheels, especially the trailer if not used a while
2. Check electrical connector plug for loose/frayed wires.
3. Make sure your hitch ball and insert are connected to vehicle with safety pin in. Now back vehicle to trailer and align trailer hitch with trailer hitch coupler.
4. Lower trailer onto hitch ball and clamp safety pin down. Check to make sure coupler goes all the way down onto ball. Two safety chains should be on trailer, cross these under the trailer tongue to hitch and connect (this is done in case trailer disconnects it will fall onto chains).

5. Once trailer is set connect electric plug and check all turn signals and brake lights.

Tips & Warnings

- Take your time - make sure that coupler and ball are fully connected.
- Double check all connections and lights, even drive a block or two and go over again.
- Cross safety chains under the trailer tongue to create a safety net if trailer were to separate from hitch.
- Check with manufacturer on proper hitch class and maximum tow weight.

Pulling a stuck vehicle out with another truck using tow straps, rope or chain

Equipment Required:	Material Required:	Personal Protective Equipment:
Truck	Sawdust/kitty litter	Heavy Gloves
Tow Rope/Strap/Chain	(for traction)	Safety Glasses

Sequence of Steps

1. Put on PPE and inspect your surroundings.
2. Walk around trucks to ensure at least 100 feet of clearance in front of pulling truck. Place traction material under wheels of vehicle.
3. Check straps for frays.
4. Attach straps to trucks with as little slack as possible. Make sure they are secured to part of the frame, not the body.
5. Have any bystanders clear the area.
6. Very slowly pull forward, being careful not to jerk too hard initially as the strap could break.
7. Do not stop pulling the stuck vehicle out until it is clearly free of being stuck and driver communicates ready to stop. Be careful here as collisions between vehicles here could occur.

17.7 Cell Phone and Media Device Use

Use of cell phones is restricted to work use only on Underhill worksites, including texting. Only the Party or Crew Chief is allowed the use of a cell phone on a worksite and for work purposes only. However, in the case of an emergency, cell phone use is allowed for all employees.

Cell phone use is restricted to hands-free devices in any Underhill vehicle. The use of cell phones while driving has been banned in the Yukon as well as B.C.

Also, the use of Ipods or other music media devices is prohibited for all employees on Underhill worksites. There are no exceptions to this rule.

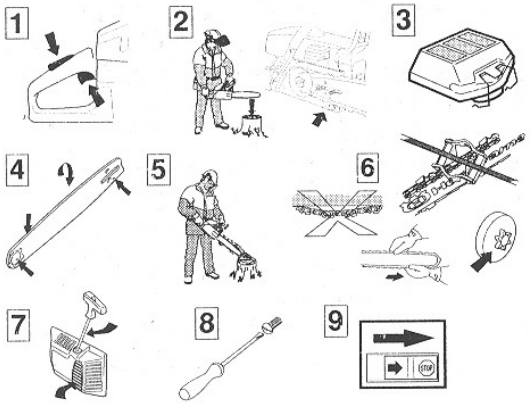
17.8 Chain Saw Operations

Chain saw operators should be trained in safe operation of a chain saw and be approved prior to working on the job site. Chain saw operators should work within the sight of another member of the slashing crew and be in radio contact with the Party Chief. Chain saw operators will abide with the following:

- Hard hats with attached visor and ear muffs, approved chain saw pants and ankle supported safety footwear will be worn
- Protective hand wear
- First aid kit in vicinity of operation
- Chain saw equipped with a chain catcher, chain brake guard
- All operators must be trained in proper chain saw use
- Two tree height safe distance must be observed between faller and rest of crew as per applicable government regulations
- All operators must be trained in first aid and chain saw safety
- Operators must know the company Emergency Response Plan
- Do not cut above shoulder height
- Ensure chain saw is shut off during fueling
- A maintenance log must be maintained for all saws, including subcontractor saws

Below you will find some general maintenance instructions.

Daily maintenance



1 Check the throttle trigger for smooth operation. If any binding occurs or if engine fails to return to idle, the machine should be taken to your dealer, before it is used again. Also, be sure that the trigger cannot be pulled until the throttle trigger lockout is depressed.

2 Clean the chain brake and check that it operates safely. Make sure that the chain catcher is undamaged, and replace it if necessary.

3 Clean or replace the air filter as necessary. Check for damage or holes.

4 The bar should be turned daily for more even wear. Check the lubrication hole in the bar, to be sure it is not clogged. Clean the bar groove. If the bar has a sprocket tip, this should be lubricated.

5 Check that the bar and chain are getting sufficient oil.

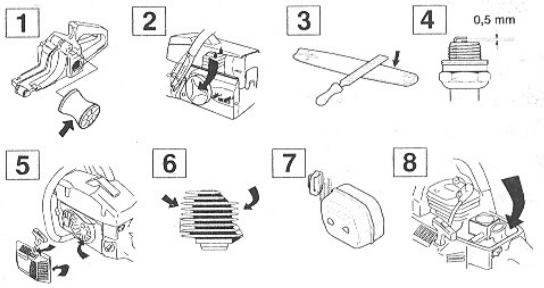
6 Sharpen the chain and check its tension and condition. Check the drive sprocket for excessive wear and replace if necessary.

7 Clean the air intake on the starter. Check the starter and starter cord for wear or damage.

8 Check that nuts and screws are tight.

9 Test the stop switch to be sure it shuts off the engine.

Weekly maintenance



1 Check that the vibration damping elements are not damaged.

2 Lubricate the clutch drum bearing.

3 File off any burrs from the edges of the bar.

4 Clean the spark plug. Check that the electrode gap is 0.5 mm (0,020 inch).

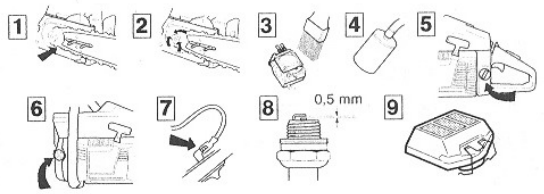
5 Clean the fins on the flywheel. Check the starter and the recoil spring.

6 Clean the cooling fins on the cylinder.

7 Clean or replace the spark arrestor mesh in the muffler.

8 Clean the carburettor compartment.

Monthly maintenance



1 Check the brake band on the chain brake for wear.

2 Check the clutch centre, clutch drum and clutch spring for wear.

3 Clean the outside of the carburettor.

4 Check fuel hose for cracks or other damage. Change if necessary.

5 Clean the inside of the fuel tank.

6 Clean the inside of the oil tank.

7 Check all cables and connections.

8 Change the spark plug.

9 Change the air filter.

Provided by Husqvarna

17.9 Material Handling

Maintain stairways, walkways, landings, ramps, platforms, etc. free of debris and waste materials that might create slipping or tripping hazards.

Keep materials in an orderly fashion. Ensure that piled materials are kept from shifting or falling. Tie down materials or equipment where necessary. In particular, be aware of adverse weather conditions or high wind conditions when working on roof areas.

Do not put materials in aisles, walkways, traffic lanes, and fire exits.

Before moving materials, check for a clear path, and ensure that you have a clear view.

Bend your knees and keep your back straight when lifting heavy objects. Your leg muscles, not your back, should do the work. If an object is too heavy for one person, get help.

When moving bulky or awkward objects, get help to avoid dropping the load or getting thrown off balance.

17.10 Ladders

Falls from elevations are the single largest cause of injury in the construction industry. It is important to be aware of the proper precautions to be taken when working from elevations.

Do not use damaged ladders. Inspect your ladder for any excessive signs of wear and tear before use. Ladders with bent or broken rungs or side rails must be removed from service immediately. Tag broken or damaged ladders, indicating the nature of the defect and return them for repair.

When using a ladder for access to a work area, ensure that the top of the ladder extends at least three feet above the landing it is intended to serve. This gives you something to get hold of both going up and down the ladder.

Make sure that the feet of the ladder are placed securely on flat even ground, and that the weight of the climber does not make the legs move.

Do not work from the top two rungs of any step or extension ladder. If you need a longer ladder get one. Make sure that you do not set the ladder too steep. The required distance that the bottom of the ladder should be from the wall is a minimum of 25%. i.e. if the wall is 10 feet high, the bottom of the ladder should be 2.5 feet away from the wall.

When using a ladder to gain access to an upper level, tie off the ladder at the top, and ensure that the ladder extends 3 feet above the edge of the upper landing.

When working near overhead power lines, survey the job to ensure that workers will not come within ten feet of the power line. Prior to working in proximity with overhead power lines, discuss the procedures required with your Party Chief and all workers involved.

Always face a ladder when climbing. Tools and equipment are not to be carried on ladders. Use rope to pass equipment up, or use a bucket for small objects.

Ensure that, where required, ladders are tied off prior to use.

When finished with a ladder, make sure that it is removed and stored in a safe manner.

17.11 Tools and Equipment

Do not use tools with split, broken, or loose handles.

Have tools with burred or mushroomed heads dressed. Keep cutting tools sharp and carry them in an appropriate container or pouch, not in your pocket.

Be sure guards are securely in place and operational before using any tools or equipment. Do not remove, disable, or bypass any guard provided for your protection.

Know the correct use of hand and power tools before using them. Use the right tool for the right job. If you are not sure, ask.

Operate machinery and equipment only within its rated capacity and at safe speeds.

Only qualified personnel may operate or service power tools, vehicles, or other machinery. Report all defects to your Party Chief or Equipment Manager immediately as per the Preventative Maintenance Guidelines.

Always ensure that the area around you is clear before swinging tools such as sledgehammers and axes.

Ensure that gasoline operated equipment is situated in a well-ventilated area and away from combustibles.

Do not ride on or operate vehicles or mobile equipment unless authorized. If a vehicle does not have a seat and a seat belt for you, you should not be riding on or in it. Riding on the forks of forklifts or in the buckets of front-end loaders is strictly prohibited.

When working in proximity to excavations, ensure that all tools and equipment are kept well away from the edge of the excavation.

Should damage or injury occur because of neglect, you, as the operator, may be held responsible.

Tools get worn out and damaged; remember, "A DAMAGED TOOL IS AN UNSAFE TOOL".

Return all damaged tools to the equipment office or truck immediately. Tag the tool, indicating the nature of the damage or defect.

17.12 Fire Protection

Remember that much of our work involves working in areas of high fire risk. Our jobs and our clients' business depend on our fire prevention awareness.

There will be no smoking on the job, other than those areas specifically designated as "smoking areas".

Know the location and use of fire extinguishing equipment and how to summon assistance. (In Whitehorse and surrounding area call 911.)

Flammable liquid containers shall be clearly labeled and stored in a protected separate area.

When using gasoline-powered engines, do not refuel hot or running engines. After re-fuelling, clean up all spills before starting.

Never use gasoline or other flammable materials as a cleaner.

Store oily rags, wiping rags, etc. in a closed metal container.

When using propane for heating or other purposes in an enclosed area, ensure that the gas supply is turned off at the cylinder when the flame is extinguished.

Ensure that all compressed gas cylinders are transported and stored in an upright position. When gas cylinders have been stored on their side, they should be left standing in the upright position for at least 30 minutes prior to use.

Fire fighting equipment is not to be used for any other purpose than that for which it is intended.

Never continue to work in oily or gasoline soaked clothing.

Never store flammable or other materials in proximity to electrical control panels. Ensure that access to such panels is unimpeded at all times.

Observe all no smoking signs. Smoke only in designated areas.

All UNDERHILL GROUP employees must familiarize themselves with the clients' fire prevention and reporting procedures prior to commencing work at the clients' premises.

17.13 Fire Extinguisher Use

You are not required to fight a fire. Ever. If you have the slightest doubt about your control of the situation, DO NOT FIGHT THE FIRE.
Use a mental checklist to make a Fight-or-Flight Decision. Attempt to use an extinguisher only if **ALL** of the following apply:

- ☑ The building is being evacuated (fire alarm is pulled)
- ☑ The fire department is being called (**dial 911**).
- ☑ The fire is small, contained and not spreading beyond its starting point.
- ☑ The exit is clear, there is no imminent peril and you can fight the fire with your back to the exit.
- ☑ You can stay low and avoid smoke.
- ☑ The proper extinguisher is immediately at hand.
- ☑ You have read the instructions and know how to use the extinguisher.

All extinguishers in the office and in the trucks are marked by this symbol.

IF ANY OF THESE CONDITIONS HAVE NOT BEEN MET, DON'T FIGHT THE FIRE YOURSELF. CALL FOR HELP, PULL THE FIRE ALARM AND LEAVE THE AREA.

Whenever possible, use the "Buddy System" to have someone back you up when using a fire extinguisher. If you have any doubt about your personal safety, or if you cannot extinguish a fire, leave immediately and close off the area (close the doors, but DO NOT lock them). Leave the building but contact a firefighter to relay whatever information you have about the fire.
Pull the pin on the fire extinguisher.
Stand several feet from the fire, depress the handle and sweep back and forth towards the fire.
Note:
Do not walk on an area that you have "extinguished" in case the fire re-ignites or the extinguisher runs out! Remember: you usually can't expect more than 10 full seconds of extinguishing power on a typical unit and this could be significantly less if the extinguisher was not properly maintained or partially discharged.
The metal parts of CO_2 extinguishers tend to get dangerously cold -- practice using one beforehand or have someone show you the proper way to hold one.
Direct the extinguisher at the base of the flames until the fire is completely out.
Recharge any discharged extinguisher **immediately** after use. If you discharge an extinguisher (even just a tiny bit) or pull the pin for any reason, call your campus or corporate Fire Marshal's office to arrange a replacement.

Use this acronym as a quick reference:

P A S S

Pull the Pin at the top of the extinguisher. The pin releases a locking mechanism and will allow you to discharge the extinguisher.

Aim at the base of the fire, not the flames. This is important - in order to put out the fire, you must extinguish the fuel.

Squeeze the lever slowly. This will release the extinguishing agent in the extinguisher. If the handle is released, the discharge will stop.

Sweep from side to side. Using a sweeping motion, move the fire extinguisher back and forth until the fire is completely out. Operate the extinguisher from a safe distance, several feet away, and then move towards the fire once it starts to diminish. Be sure to read the instructions on your fire extinguisher - different fire extinguishers recommend operating them from different distances. Remember: Aim at the base of the fire, not at the flames!!!!

Once the fire is out, don't walk away! Watch the area for a few minutes in case it re-ignites. Recharge the extinguisher immediately after use.

17.14 Electrical Safety

Do not lift electrical tools or equipment by their cords.

Do not use electrical power tools or equipment while standing in water. Keep electrical cords out of standing water.

Consider all wires and electrical panels "live" until checked out.

Only qualified personnel will make any electrical repairs or installations. Do not use metal ladders or hard hats near high voltage electrical installations.

Cord splices or repairs shall be electrically and structurally equal to the original cord's quality (no substandard or makeshift patching).

Do not use two prong plug adapters. Do not remove the grounding prong from electrical cords or equipment. If the grounding prong is removed, remove the equipment from service until repaired.

Coil and store electrical cords when not in use.

Protect cords in high traffic areas and roadways by placing planks or other protection on both sides of the cord.

Never attempt to put out an electrical fire using water. Use only a Class C fire extinguisher on electrical fires.

When used outdoors or in a wet or damp location, portable electrical equipment, including temporary lighting, must be protected by an approved ground fault circuit interrupter of the class A type installed at the receptacle or on the circuit at the panel, unless another acceptable means

of protection is provided.

A ground fault circuit interrupter must not be used in place of grounding except as permitted by the Electrical Safety Act and the regulations made under it.

The UNDERHILL GROUP uses only fully qualified persons to repair electrical tools and equipment. Promptly tag all damaged electrical tools and equipment, and return them to the equipment manager for repairs.

17.15 Excavations

It is critical that all employees are aware of the regulations regarding excavations before they enter or are working around excavations or trenches. The related regulations are:

Yukon Occupational Health and Safety Regulations – Section 10.62 to 10.72

WorkSafeBC Occupational Health and Safety Regulations – Section 20.78 to 20.95

These regulations should be reviewed before entering any excavation or trenching area. The regulations can be found in the truck or the office.

17.16 Fall Protection

Employees of the UNDERHILL GROUP are sometimes required to work in circumstances where they may be subject to the hazard of falling from unprotected portions of structures or buildings. The Fall Protection program has been prepared to assist employees in developing measures to control or eliminate the risk of injury posed by such falling hazards. The Fall Protection Program meets or exceeds the requirements of the Yukon Worker's Occupational Health and Safety Regulations in Part 1.37 and WorkSafeBC's Occupational Health and Safety Regulations in Part 11. It is the responsibility of every employee to familiarize themselves with the contents of the program and to ensure all required precautions are in place prior to commencing employment at heights in excess of ten feet above grade or floor level, or when a fall of less than ten feet above grade may incur injury.

It is the responsibility of the Health & Safety Officer to ensure a site-specific fall protection plan is developed, as required by the regulation, and that all workers are instructed in the contents of the site specific plan.

For sites that require that fall protection must be used, only employees that have Fall Protection Training may carry out the work, and must wear correct P.P.E. These items include dog leashes, harnesses and lanyards. Fall Protection training and certification for employees is provided by Underhill through a third party licensed for the certification (e.g. Hazmasters).

Fall Protection P.P.E will be maintained in working order and kept clean. Employees and supervisors will inspect this equipment to ensure it is working correctly before using.

The preferred method for the protection of workers against falling is use of standard guardrails; however, in those circumstances where the use of standard guardrails is impracticable this fall protection plan shall be used.

The UNDERHILL GROUP will do its best to find a more preferable way of measuring distances and heights where applicable. These could include the use of reflector-less EDMs or mathematical calculations to determine height or distance.

Failure to comply with the contents of this Fall Protection Plan and any site-specific plan is a serious violation of the UNDERHILL GROUP safety policy, the Yukon OH&S Regulations and WorksafeBC's OH&S Regulations.

17.17 Hazardous Materials

The UNDERHILL GROUP's use of any product designated as a hazardous material will abide by all territorial and federal legislation.

All hazardous products in use will have a MSDS sheet.

Only employees trained in WHMIS and TDG (if transporting material) will handle hazardous material.

Underhill will ensure that employees are familiar with any hazardous biological or chemical substances that they may be exposed to, and will provide training regarding the safe exposure limits, spills and emergency clean up procedures.

Written clean up and emergency procedures will be formally established for the site based on the materials being used and the restrictions of the site.

Eye wash stations are located in the office, and all company vehicles carry portable eye wash bottles. A washing station will be established for washing exposed skin on sites where hazardous materials exist.

17.17.1 Waste Disposal

THE UNDERHILL GROUP will comply with all relevant territorial and federal legislation policies and procedures on waste disposal and environmental protection.

17.17.2 Workers Hazard Materials Information System (WHMIS)

THE UNDERHILL GROUP recognizes the importance of the correct usage of Hazardous Materials (controlled products), along with their storage and handling. Exposure to such materials may result in serious health effects. In addition, some materials can cause fires or explosion.

WHMIS is a communication system on controlled products in the workplace—from the suppliers of controlled products, to ourselves and our workers through the following key elements:

- Labeling
- Material Safety Data Sheets (MSDS)
- Worker Education

Health & Safety Officers shall be responsible for delegation of personnel to maintain the inventory, storage, control, distribution, and handling of controlled products and shall ensure that all employees are familiar with WHMIS procedures. They will also ensure the proper completion and distribution of MSDS.

17.17.3 Labeling

An employee shall not accept any container of hazardous goods unless it is properly labeled, as per the requirements of the Controlled Products Regulation (Canada)
An employee shall not remove, deface, modify, or alter any supplier label.
In the event that a Controlled Product is placed at a worksite in a container other than the container from the supplier, it is required that a workplace label be applied to the container immediately.

Exceptions are, if the controlled product:

- is under the control of, and is used exclusively by, the worker who filled the portable container
- is used only during the shift in which the portable container was filled
- contents of the container is clearly identified, or
- is all required for immediate use.

17.17.4 Material Safety Data Sheets (MSDS)

MSDS are required for all controlled products supplied to the workplace. They are to be retained for a period of three years. Updated MSDS are to be obtained from suppliers for any applicable product that remains at the workplace beyond this period. In the event that The UNDERHILL GROUP produces a controlled product for use at the workplace, a MSDS will be developed in accordance with the current Occupational Health and Safety WHMIS regulations.

The UNDERHILL GROUP will ensure that a copy of the MSDS is prepared in accordance to procedures and made readily available:

- at the jobsite, to employees who may be exposed to the controlled product,
- to the joint Occupational Safety and Health Committee, if any, and
- to a Safety and Health Representative, if any.

17.17.5 Exposure Monitoring

The UNDERHILL GROUP understands that the exposure to controlled substances can pose serious health risks and will take measures to ensure that exposure levels do not reach dangerous levels. Hazard Assessments are preformed pre-job to assess the potential for exposure, taking into account all routes of exposure, including inhalation, ingestion and skin contact. Reassessment is conducted when there is a change in work conditions, which may increase exposure.

When a controlled substance has been identified, Underhill will create an exposure control plan to ensure that exposure to the substance does not exceed the ceiling limit, short-term exposure limit, or 8-hour limit.
The exposure control plan must incorporate the following elements:
(a) a statement of purpose and responsibilities;
(b) risk identification, assessment and control;
(c) education and training;
(d) written work procedures, when required;
(e) hygiene facilities and decontamination procedures, when required;
(f) health monitoring, when required;
(g) documentation, when required.

17.18 Complaints Against Motorists (Violations and Assaults)

Some suggestions for laying a complaint against a motorist are as follows:

- Gather as much information as possible about the offender i.e. license number, vehicle make & color, description of the driver and names of witnesses. Keep a note pad with you at all times.
- Call the local police force or 911 in the event of an emergency. Report any injuries.
- Relate complete details of the incident to the police.

The local police force will evaluate all evidence and determine:

- What charges apply
- What charges to lay
- What appropriate action should be taken

Make detailed notes of the incident as soon as possible and retain them in a safe place. You will require them should the matter go to court. Provide a copy for the investigating officer.

17.19 Traffic Control

At times it is necessary to work near or on active roads as part of Underhill's day-to-day activities. Underhill Geomatics Ltd. recognizes that this is a hazard to all employees and will take steps to ensure that the work is completed safely. Underhill will also ensure that traffic control equipment, arrangements and procedures meet the requirements of BC OH&S regulations in Part 18 – Traffic Control.

Before work on an active roadway commences, a Worksite Inspection Form will be completed to determine the level of risk associated with the area. Factors affecting the level of risk include, but are not limited to:

- Direction of traffic being controlled (two way or one way)
- Traffic speed
- Traffic volume
- Duration of traffic control operation
- Traffic control extending into dusk or night time hours
- Sightline for oncoming traffic
- Whether traffic control will be performed in intersections
- Other problematic elements such as active driveways, merging traffic, bus stops, active mobile equipment

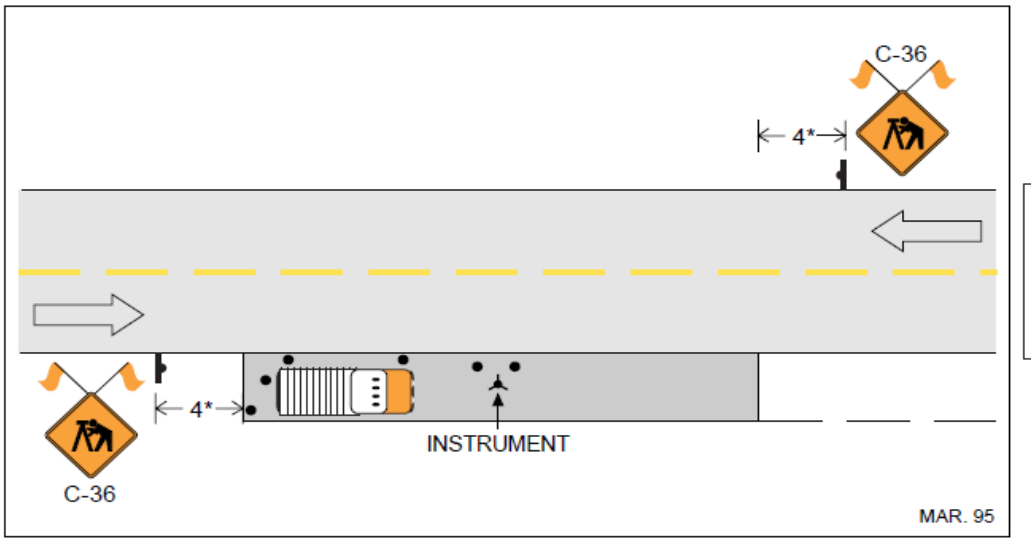
At any worksite that requires traffic to be diverted or where the level of risk exceeds a minor level, Underhill will defer traffic control to a qualified Traffic Control Person or a traffic control company.

For more information refer to the *Traffic Control Manual for Work on Roadways ("Traffic Control Manual")* issued by the Ministry of Transportation (MOT), (Chapter 3.8) found in the Underhill Truck Safety Manual.

17.19.1 Work on the Shoulder of Roads

Working on the shoulder of the road requires the same amount of caution as working within the roadway itself. Work on the shoulder of a road requires that signs be placed at an appropriate distance from the work, and cones be set up around the equipment as per Figure 3.8.1 from the Traffic Control Manual:

Figure 3.8.1 Surveying – Work on Shoulder



- Buffer vehicle with 360° and 4-way flashers is required for speed limits of 70 km/h or greater and on high volume roads.

17.19.2 Traffic Control

As stated previously, any worksite that requires traffic to be diverted or where the level of risk exceeds a minor level, Underhill will defer traffic control to a qualified Traffic Control Person or a traffic control company. Underhill does not direct traffic in its normal line of work, but the general safety rules in a traffic environment can still be applied, using BC OHSS regulations as a guide.

Any Underhill employee directing traffic must have BC Traffic Control Person training.

A traffic control person must: (a) stand in a safe position, preferably on the driver's side of the lane under the TCP's control, be clearly visible, and have an unobstructed view of approaching traffic, and (b) be positioned at least 25 m (80 ft) away from the work area unless circumstances or space requirements, such as working at or near an intersection, dictate otherwise.

Each traffic control person must be provided with, and must use, all of the following:

(a) a traffic control paddle meeting the requirements for a C-27H Traffic Control Paddle as specified in the *Traffic Control Manual* and, if necessary to control fatigue, a non-conductive support staff for the paddle;

(b) high visibility apparel meeting

(i) the Type 1 or Type 2 criteria of *WCB Standard Personal Protective Equipment Standard 2-1997, High Visibility Garment,* or

(ii) the Class 2 or 3 garment criteria of *CSA Standard Z96-02, High-Visibility Safety Apparel,* with a fluorescent background colour;

(c) wrist and lower leg bands fitted with a minimum 5 cm (2 in) wide fluorescent retroreflective strip about their entire circumference, except that wrist and lower leg bands are not required for a traffic control person performing this function on an emergency or a temporary basis and not as part of their normal duties;

(d) safety headgear of a high visibility colour with a strip of retroreflective tape across the top from front to back and on the sides;

(e) an effective means of communication when traffic control persons are not visible to each other, which under no circumstances means a system of passing batons or similar items to indicate the last vehicle traveling through the zone under control.

17.20 Forestry Work

Underhill does not fell trees in its normal line of work, but the general safety rules in a forestry environment can still be applied, using BC OHSS regulations as a guide.

No Underhill employee may fell trees unless trained and qualified to do so.

Employees must remain out of the immediate vicinity of trees being felled. The immediate vicinity is defined as 2 tree-lengths.

The falling of a tree must use a sufficient undercut and the undercut must be complete and cleaned out.

Falling or bucking must not be started if a tree or log is in a condition that, if felled or bucked in that condition, the tree or log would pose a reasonably foreseeable risk to a worker.

Highly visible outer clothing must be worn by a worker in a forestry operation if the worker may be endangered by any moving equipment or line, the worker's location must be routinely checked, or the worker is involved in harvesting trees at night. Safety headgear worn by a worker in a forestry operation must be a high visibility colour that contrasts with the background against which the worker is working. It is recommended that all employees wear hard hats and filed cruiser vests at all times.

17.21 Thermal Exposure

Underhill crews work in a variety of climate conditions, and the effects of some of these conditions can be hazardous. As crews are usually exposed to the elements, there are few engineering controls that can be used.

Underhill supplies sunscreen to limit the effects of UV radiation, but crews must supply their own protective clothing to reduce the effects of thermal exposure.

These may include:

a) Shorts (where the site permits exposure of skin)

b) Thermal underwear / long johns etc.

c) Thermal work boots, heavy socks and boot liners

d) Heavy duty gloves

e) Thermal headgear (which does not negate the effects of wearing a hard hat)

f) Heavy duty outer layers e.g. down jackets, Gortex rail suits etc.

17.21.1 Thermal Exposure Management

- Provide the necessary information about thermal exposure
- Communicate employer expectations
- Monitor hours worked by each crew
- Review the impact in relation to accidents, incidents, quality and quantity of work
- Support employees who are experiencing concerns with thermal exposure
- Investigate any problems and/or concerns

17.21.2 Heat Exposure

Heat exposure can be fatal. It is important that crews working in extreme heat conditions be familiar with the effects of heat stress, and mitigate accordingly. Crew Chiefs need to be aware of the symptoms and act accordingly.

Symptoms of heat stress include:

- Heat rash
- Heat cramps due to heavy sweating salt loss
- Heavy sweating
- cool moist skin
- body temperature over 38°C
- weak pulse
- normal or low blood pressure
- person is tired and weak, and has nausea and vomiting
- very thirsty; or is panting or breathing rapidly; vision may be blurred

Controls that can be used:

- Rotate crew members so that they are exposed for shorter time periods
- Provide access to cooling stations, offices, air conditioned vehicles to allow for body temperature normalization
- Organize work shifts to avoid working at peak temperature times. This can be just avoiding working during noon hours, or switching over to a night shift
- Provide water to prevent dehydration

Any worker that shows signs of heat stress must be removed from the heat and get immediate medical attention.

17.21.3 Cold Exposure (Hypothermia)

Cold exposure can be fatal. It is important that crews working in extreme cold conditions be familiar with the effects of cold stress, and mitigate accordingly. Exposing skin in some conditions can result in frostbite.

Symptoms of cold stress include:

- Shivering
- Lack of coordination, stumbling, fumbling hands
- Slurred speech
- Memory loss

- Pale, cold skin
- Unable to walk or stand
- Confused and irrational

Controls that can be used:

- Rotate crew members so that they are exposed for shorter time periods
- Provide access to warming stations, offices, heated vehicles to allow for body temperature normalization
- Limit exposure to the effects of wind-chill by engineering some protection from the wind. This may be as simple as working on the lee side of a building or moving the truck to provide some wind protection
- Provide water to prevent dehydration
-

Any worker that shows signs of cold stress or frostbite must be removed from the cold and get immediate medical attention.

18 SAFE JOB PROCEDURES

The following pages contain safe job procedures that have been developed by employees of the UNDERHILL GROUP and reviewed by the safety officer and partners. They represent a documented safe procedure for common jobs performed by Underhill employees and Party Chiefs.

If any Underhill employees, Party Chiefs or managers believe that the provided job procedures can be improved upon or want to submit a safe job procedure of their own, ask your safety officer for the appropriate form to fill out.

18.1 Site Evaluation (Inspection) (General)

Developed by: 1.__FBU_____ 2._____ Date: Mar. 15, 2007

Approved by: _____ Position:_____ Date:_____

Revised by: 1. Jeremy Jones 2. Bruce Underhill Date: Oct. 12, 2007
3. Braden Elke Date: November 16, 2009

Forms Required	**Personal Protective Equipment**
Worksite Inspection Form	Regular PPE
Job Hazard Assessment Form	
Daily Safety Checklist	

Job Steps:

If working in an urban area and the job will require digging, ensure that a utilities locates company has provided documentation or field markings to show the position of underground utilities
must be contacted at least 48 hours in advance. This is to make sure that no underground power lines will be disrupted. Perform your Daily Safety Equipment check and fill out appropriate form

1. When arriving at job site look for signs of occupation. If the site is locked and inaccessible contact the office, report the situation and get direction. If the person(s) are present, introduce yourself, the company and briefly explain reason for being there. Keep in mind client confidentiality and if detailed questions are asked refer them to the office manager for clarification. Make note of the name of the person(s) met and any items discussed.
2. Respect private owners' property and items found on site. If gates need to be opened to access a site, ensure they are closed when leaving.
3. Take a 360 degree view if the area to ensure there are no safety issues.

Key things to look for:

- In enclosed areas look for evidence of structural, functional and ventilation problems (i.e. Jagged edges, worn areas, leakage, noxious fumes, unusual noise, etc.)

- For outdoor areas look for overhead power and telephone lines, underground cables etc. Set up proper road signs for highway and city work. (See Road Signs procedure)
- Deviations from safe work practices and procedures (i.e.: unusual ground for tripod set ups or pin setting, fences or structures on line, power lines, etc.). New job procedures will require a Job Hazard Assessment Form filled out.
- General Housekeeping (i.e.: protruding nails, improper storage, blocked exits, accumulations of combustible materials, spills, items that could cause slips, trips or punctures etc.)
- Danger Signs (i.e.: caution tape, barricades, warning or danger signs, alarms or other devices used to identify a known hazard or limit access to a work area.)
- A risk assessment must be carried out to determine if there a risk of injury to workers from violence arising out of their employment at the work site. The risk assessment must include the consideration of previous experience in that site, occupational experience in similar workplaces, and the location and circumstances in which work will take place. If there is a risk of violence at the work site, the Party Chief must report this information immediately to the Managing Partner and Safety Officer so that precautions can be taken. All employees entering a site known to have any risk of violence must be notified of this issue before entering the site.

4. If you have to cross adjoining owners' properties and/or dig up survey evidence on adjoining properties attempt to contact the owners first to let them know who you are and who you work for. Again try and keep the explanation brief and general to keep our clients confidentiality. If adjoining owners are not home then leave a company business card at their entrance. If it is necessary to dig for survey evidence, ensure the hole is filled in before leaving.
5. Fill out appropriate Worksite Inspection Form.
6. Do not move or use any private property (ladders, boats, lumber, etc.) on a job site without the permission of the owners. Ladders etc. may not be up to OH&S standards which may cause complications with compensation if an accident occurs. If owners are not present to give permission then find another way around the problem.
7. When placing survey hubs, spikes or monuments ensure that they will not injure people and property, i.e. in farmer's fields or driveways and on trails and roads counter sink all monuments and place reference posts in a safe location as close as possible; remove all nail and sails from traveled roads and high traffic areas.
8. Be sure to have good housekeeping and clean up after yourself. No garbage, cigarette butts or excess flagging, wood splinters, loose nails, etc.

Part Chiefs review the Site Evaluation Process on a peer-to–peer basis and train field workers to understand the issues in hazard identification.

18.2 Chaining Wall Widths and Heights in Condominiums

Developed by: 1. Katie Munroe 2._____ Date: March 30, 2007

Approved by: _____ Position:_____ Date:_____

Revised by: 1. Jeremy Jones Date: March 30, 2007

2. Braden Elke Date: November 16, 2009

Equipment Required	Material Required	Personal Protective Equipment
Pocket tape or chain		Regular PPE

Job Steps:

1. Assess area for any dangers or hazards, speak with foreman or safety officer about jobsite if necessary

2. (for width) Make sure chain or tape is not hung up or caught on any objects; have chainman hold end of tape in corner or at the edge of the wall. Ensure chain is level and pulled tight to other corner/edge

3. (for height) Make sure there are no obstructions or risk of falling materials; hold rod/chain at top of ceiling. If ceiling is taller than rod, mark the position of the rod bottom when being held level, then measure from the floor to mark. Add measurement to rod length for ceiling height. Always ensure rod is level and chain is tight.

4. Read and record measurement in field book, note what type of surface being measured (ie. drywall, wood etc.) make sure what is being measured is clear in field book

5. Always be wary of hazards around you and workers on the jobsite if applicable.

18.3 Construction Projects (General)

Developed by: 1. J.C. Bourget 2._____ Date:_____

Approved by: _____ Position:_____ Date:_____

Revised by: 1. Jeremy Jones Date: March 30, 2007
2. Braden Elke Date: November 16, 2009

Equipment Required	Material Required	Personal Protective Equipment
Strobe Beacon Passenger Vehicle	Surveying Equipment	Hi-Visibility and regular PPE

Job Steps:

1. Travel to the work zone in a safe manner; drive defensively, watch for wildlife, pedestrians and cyclists and obey the rules of the road
2. Park vehicle away from heavy equipment and as far off the side of the road as necessary to avoid being a distraction or danger to drivers and road crews
3. Put on PPE
4. Perform worksite inspection and hazard assessment and perform any corrective actions required

5. Be aware of heavy equipment and traveling public as well as any wildlife in the area
6. Drink lots of fluids and take proper breaks throughout the day
7. Be aware of any changing worksite conditions, ie. dusty conditions that can prevent the public from seeing you on the highway, and perform corrective actions
8. Return from the job site in a safe manner, obeying proper rules of the road

18.4 Driving on center line for GPS

Developed by: 1. Angie Lange 2._____ Date: May 7, 2007

Approved by: _____ Position:_____ Date:_____

Revised by: 1. Jeremy Jones Date: September 21,2007
2. Braden Elke Date: November 16, 2009

Equipment Required | Material Required | Personal Protective Equipment

Proper road signs
Radios
Two trucks

Job Steps:

1. Lead vehicle will be supplied with the GPS unit and also monitors oncoming traffic radioing the second vehicle if traffic is coming and moves to the shoulder
2. Second vehicle follows at a safe distance and monitors traffic coming from behind radioing the lead vehicle if traffic is coming and moves to the shoulder

18.5 Pre-marking Centre Line

Developed by: 1. AL 2. JJ Date: _____

Approved by: _____ Position: _____ Date: _____

Equipment Required: | Material Required: | Personal Protective Equipment:

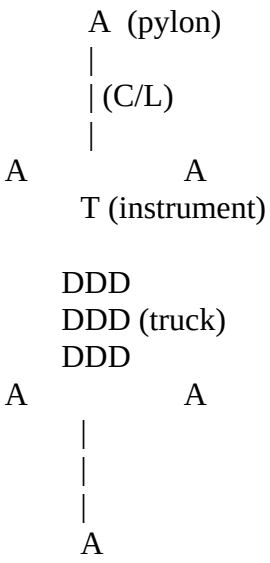
Cones
Proper road signs

Standard PPE
High visibility vest/jacket/hardhat

Job Steps

1. Set up signs approximately 300m outside work zone.
2. Keep work zone short, ie. 1-2km long.
3. Put pylons on centre line at 200-300m to keep drivers from passing.

4. Park truck on centre line at the instrument, put 2 cones on either side and turn hazard and beacon lights on.
5. Be cautious of all drivers regardless of signs and pylons.



18.6 Making grade stakes for earthworks projects

Developed by: 1. J.C. Bourget 2._____ Date:_____

Approved by: _____ Position:_____ Date:_____

Revised by: 1. Jeremy Jones Date: March 30, 2007
2. Braden Elke Date: November 16, 2009

Equipment Required	Material Required	Personal Protective Equipment
Chainsaw	48” bundles of lath	Regular PPE
Flagging		Chainsaw safety gear
Spray paint		Hearing protection

Job Steps:

1. Ensure PPE is in proper working condition
2. Being aware of splinters, remove lath from storage and mark at halfway point
3. Tie flagging 15cm from halfway mark on either side to hold lath together
4. To ensure saw doesn’t touch the ground or kickback, block bundle at a sufficient height from ground and at a safe distance from trees or brush
5. Place weight or have assistants hold ends of bundle to stabilize it
6. Ensure PPE is in place, start chainsaw using proper procedures and cut with proper cutting practice
7. Sharpen end of the stakes that do not have a point with an axe, striking in a downward motion away from the body
8. To paint stakes, hold up to 5 in hand in a fan-like position; using the wind to keep the paint from blowing back on self and others, point can away from body and towards the

ground (this also applies to pre-made 24” lath that doesn’t need to be cut)

18.7 Setting Grade & Alignment Stakes

Developed by: 1. Angie Lange 2._____ Date: May 7, 2007

Approved by: _____ Position:_____ Date:_____

Revised by: 1. Jeremy Jones Date: June 15, 2007
2. Braden Elke Date: November 16, 2009

Equipment Required	Material Required	Personal Protective Equipment
Sledge Hammer	18” or 36” Lathe	Regular PPE
Chisel (Bull Prick)		Eye Protection
		High Visibility Vest

Job Steps:

1. Set up traffic signs and cones
2. Clear away all debris and obstructions once location has been surveyed
3. Using a small one hand sledgehammer, pound chisel or “Bull Prick” into the ground. Make sure to check chisel and hammer for mushroomed heads
4. Quickly remove chisel and insert lathe. Tap in carefully so as not to break the lathe possibly injuring the hand holding the lathe. Mark lathe accordingly once set.
5. Move to next surveyed spot making sure to watch for traffic and repeat steps 2 to 4

18.8 Setting a Post

Developed by: 1. Jess Fletcher 2._____ Date: April 20, 2007

Approved by: _____ Position:_____ Date:_____

Revised by: 1. Jeremy Jones Date: May 5, 2007
2. Braden Elke Date: November 16, 2009

Equipment Required	Material Required	Personal Protective Equipment
Sledge Hammer	CLS 77 legal post	Regular PPE
		Eye Protection

Job Steps:

1. Clear away all debris and obstructions once location has been surveyed
2. Make sure you have all appropriate PPE
3. Put post on desired spot, markings facing proper direction

4. Tap post into ground with one hand on hammer near the head of the sledge in 'choked up' position and other hand holding post below marking head
5. Once post is deep enough to freely stand, swing hammer with both hands in proper position for better leverage, be sure not to damage post markings or damage sledge hammer
6. When post has been pounded down flush with the ground and markings are still visible check line and distance with instrument operator.
7. To make adjustments for line and distance, use hammer to tap post head in desired direction.
8. Recheck line and distance after each adjustment until post is in the proper spot. Be sure to hit the post straight on and not glance off one of the sides as this can cause injury.
9. When in proper place, use flagging so post will be more visible.

18.9 Setting a Marker

Developed by: 1. Ricky Baker 2._____ Date: April 13, 2007

Approved by: _____ Position:_____ Date:_____

Revised by: 1. Jeremy Jones Date: April 13, 2007
2. Braden Elke Date: November 16, 2009

Equipment Required	Material Required	Personal Protective Equipment
Sledge Hammer	Marker post & plate Eye Protection	Regular PPE

Job Steps:

1. Measure off 30cm from monument (see "setting a monument" procedure)
2. Place marker post in ground facing post, preferably on line.
3. Grip marker post in one hand and sledge hammer in the other
4. Pound post in, keeping hand out of the way of the sledge
5. When at desired depth, bend marker post to face monument and stand straight up
6. Place survey plate on marker post to face monument

18.10 Excavating existing monuments **(eg. Buried in asphalt)**

Developed by: 1. John Tom Tom 2._____ Date: March 1, 2007

Approved by: _____ Position:_____ Date:_____

Revised by: 1. Jeremy Jones Date: March 30, 2007
2. Braden Elke Date: November 16, 2009

Equipment Required	Material Required	Personal Protective Equipment

Pin finder	Gloves
Shovel	Safety goggles
Digging bar	Steel toed boots

Job Steps:

1. Use pin finder to locate monument by criss-crossing the area with the pin finder to minimize digging area
2. Use digging bar to chip away any solid ground (ie, asphalt, gravel, clay, etc.) within digging area
3. Use shovel to clear away any loose soil within digging area that was produced by the digging bar
4. Repeat steps 1 through 3 until monument is uncovered
5. If needed, use wire brush to clean off monument to read existing markings to be recorded in field book
6. Ensure proper use of PPE throughout the procedure

18.11 Setting a Line Picket

Developed by: 1. Ricky Baker 2._____ Date: June 22, 2007

Approved by: _____ Position:_____ Date:_____

Revised by: 1. Jeremy Jones Date: June 22, 2007
2. Braden Elke Date: November 16, 2009

Equipment Required	Material Required	Personal Protective Equipment
Axe	Straight stick (small tree)	Regular PPE Eye Protection

Job Steps:

1. Pick a straight stick or small tree 1-2m long and 3-5cm thick
2. Trim all branches and leaves using your axe. Be sure to trim away from your body preferably using a stump for support
3. Again, preferably using a stump for support, or swinging your axe away and behind you, shave a point on the thicker end of the picket
4. Flag the top of the picket with flagging in a crisscross pattern half a meter down the picket
5. To set picket on line call the instrument man on the radio to set it properly

18.12 Making a Tripod

Developed by: 1. Angie Lange 2._____ Date: May 7, 2007

Approved by: _____ Position:_____ Date:_____

Revised by: 1. Jeremy Jones Date: April 4, 2008
2. Braden Elke Date: November 16, 2009

Equipment Required	Material Required	Personal Protective Equipment
Chainsaw or axe	Wire	Regular PPE
	Flagging	Chainsaw PPE (chaps etc.)
	Small trees	

Job Steps:

1. If using a chainsaw, be sure to wear proper PPE for its use
2. for making the three legs, refer to steps 1 through 3 for "Setting a Picket"
3. Stand legs up and lash them together with the wire or flagging in a pyramidal shape about 30cm from the tips
4. Use multiple types of flagging with different colors for visibility
5. Place tripod on or behind the point of interest

18.13 Line Cutting with Two Cutters

Developed by: 1. Neal Allison 2._____ Date: June 22, 2007

Approved by: _____ Position:_____ Date:_____

Revised by: 1. Jeremy Jones Date: June 22, 2007
2. Braden Elke Date: November 16, 2009

Equipment Required	Material Required	Personal Protective Equipment
Chainsaw		Chainsaw PPE
		Eye Protection

Job Steps (Thick Brush):

1. First cutter quickly cuts out rough line - large trees and heavy brush
2. Second cutter follows two tree lengths behind the first, widening the line, bucking up large logs for the swamper to clear and carrying gas cans

Job Steps (Light Brush):

1. Cutters will leapfrog each other in light bush. One cutter will move ahead 2 tree lengths

from the other. Both cutters will cut in the same direction maintaining 2 tree lengths between them

2. When the rear cutter has reached the forward cutter's cut line, he will grab the gas cans and get the forward cutter's attention. Do not approach forward cutter until saw is shut off and contact is made. Once this is done, the rear cutter will proceed past the forward cutter at least 2 tree lengths ahead, leaving the gas cans where he begins for the now rear cutter to pick up when he reaches them
3. Cutters must maintain communication and be aware of each other at all times. No mobile CD or mp3 or any other kind of music players allowed.

18.14 Swamping a Cut Line

Developed by: 1. Ricky Baker 2._____ Date: April 13, 2007

Approved by: _____ Position:_____ Date:_____

Revised by: 1. Jeremy Jones Date: April 13, 2007
2. Braden Elke Date: November 16, 2009

Equipment Required	Material Required	Personal Protective Equipment
Axe	Flagging Eye Protection	Regular PPE

Job Steps:

1. Watch for falling debris (trees, tree tops, branches)
2. Stay at least two tree lengths back from cutters
3. Clean line free of debris, such as branches, logs (3ft long or shorter)
4. Do three sided blazes , facing line, on trees with your axe making sure the trees are 10-15cm in diameter
5. Set line pickets (see procedure for line pickets) for cutters
6. Continue to clean line about 2m wide and keep an eye on cutters
7. Have cutters buck logs to your request to ease in lifting.

18.15 Proper Heavy Drill Use (Hilti or Cobra)

Developed by: 1. Jess Fletcher 2._____ Date: Sept., 2007

Approved by: _____ Position:_____ Date:_____

Revised by: 1. Jeremy Jones Date: April 4, 2008
2. Braden Elke Date: November 16, 2009

Equipment Required	Material Required	Personal Protective Equipment
Drill and bits		Regular PPE Safety glasses Earplugs or muffs

Proper ventilation mask if dusty

Job Steps:

1. Remove drill from box or bag, making sure to lift with your legs
2. Install bit into the chuck and make sure it is securely locked in place
3. Place bit tip on your point and ensure that drill is straight and level. Again, be sure to be lifting the drill with your legs, not your back.
4. Slowly engage power so the bit does not 'walk around.' Once the hole has been started use full power. Do not push down too hard on the drill – let it do all the work.
5. There will be a steady stream of rock dust coming from the hole. Lift the drill up and down in the hole to clear the dust until you reach the desired depth

18.16 Setting and Proper use of a Sledgehammer

Developed by: 1. Ricky Baker 2._____ Date: June 22, 2007

Approved by: _____ Position:_____ Date:_____

Revised by: 1. Jeremy Jones Date: June 29, 2007
2. Braden Elke Date: November 16, 2009

Equipment Required	Material Required	Personal Protective Equipment
Sledge hammer head	Flagging	Regular PPE
Proper length handle	Sand paper or	Eye Protection
Small metal wedge	rough wood file	

Job Steps:

Setting the Sledge

1. Using sand paper or the wood file, shave the end of the handle so it fits snugly into the head. Be careful not to shave the end of the handle too much or it will be weak or the head may fly off. Make sure the handle is flush with the top of the head.
2. If the handle is too snug and the handle is part way in you can tap the handle on a block of wood or on the floor holding the sledgehammer straight up and down. The weight of the head will drive itself down on the handle. If the handle goes too far and sticks out the top, cut off excess wood.
3. Make sure handle is 90° to the head for flat striking surface and balance.
4. Once head is set, hammer the small metal wedge into the wood of the handle at the top of the head to secure handle.

Using the Sledge (for posts and markers see those procedures)

1. Face target with legs shoulder length apart and the sledge on the ground in front of you.
2. Bend at the knees, not at the waist, to pick up the sledgehammer. Slide one hand down the handle towards the head to more easily pick up the sledge.

3. Swing hammer with hands about a foot or more apart (whatever feels more comfortable) to maintain a solid grip on the hammer and to have maximum downward force on the target

18.17 Wearing A Safety Harness

Developed by: 1. AL 2. JJ Date: _____

Approved by: _____ Position: _____ Date: _____

Equipment Required: Material Required: Personal Protective Equipment:

Fall Restraint/Arrest Harness

Sequence of Steps

1. Inspect harness thoroughly before every use
2. Pick up harness by D-Ring and clip on lanyards
3. Pull apart shoulder straps and put arms through.
4. Attach chest strap.
5. Do up leg straps by passing straps between legs and through buckles.
6. Make sure leg straps are snug but loose enough for comfort.
7. Make sure you have an engineered anchor point, ie. structural steel beams, not hand railings. If none available, eg. edge of a cliff, anchor points must be designed.
8. Clip off lanyards as high as possible to reduce slack
9. Use 2 lanyards if moving from one lifeline to another

18.18 Working On An Unfinished Bridge Deck

Developed by: 1. AL 2. JJ Date: _____
Approved by: _____ Position: _____ Date: _____
Revised by: 1. _____ 2. _____ Date: _____

Equipment Required: Material Required: Personal Protective Equipment:

Standard PPE
Fall Restraint/Arrest Harness
Life Jacket

Sequence of Steps

1. Put on PPE in this order: 1. Life Jacket 2. Harness 3. Safety Vest.
2. Walk to required location on bridge deck.
3. Clip harness lanyard onto 2 secure points, eg. Bolts or scaffolding.
4. Take required shot.
5. Unclip harness lanyard and move to next shot, one should never be unclipped if within 10ft of a fall of 10ft or more.
6. Repeat before every shot near side of bridge deck.

18.19 Topography shots at the top of a steep bank or cliff

Developed by: 1. Angie Lange 2._____ Date: Sept., 2007

Approved by: _____ Position:_____ Date:_____

Revised by: 1. Jeremy Jones Date: April 4, 2008
2. Braden Elke Date: November 16, 2009

Equipment Required	Material Required	Personal Protective Equipment
Telescopic rod prism		Regular PPE

Job Steps:

1. Extend telescopic rod with prism attached to the end to about 5m long
2. Lay flat on the ground and push prism to edge bank or cliff
3. Be sure to distribute your weight evenly

18.20 Setting a Cut Cross

Developed by: 1. Tim Erickson 2._____ Date: July, 2009

Approved by: _____ Position:_____ Date:_____

Revised by: 1. Braden Elke Date: November 16, 2009

Equipment Required	Material Required	Personal Protective Equipment
Ruler		Regular PPE
Colored Pencil		Knee Pads
Hand Prism		Gloves
Scribe		

Job Steps:

1. Put on appropriate PPE including regular PPE, gloves, and kneepads.
2. Clear area of any known hazards and protect area with any safety precautions deemed necessary.
3. Mark plug line using a coloured pencil at two points 5cm on either side of the approximate distance location.
4. Use the coloured pencil to join the two points with a line using a straight edge. Confirm line with instrument operator.
5. Measure a distance to a well-defined mark along the pencil line. Calculate the offset from the mark to the target distance of the plug. Make a perpendicular pencil line to the initial pencil line at the target distance (minimum of 10cm in length).

6. Use a scribe to cut the pencil lines into the ground surface, and wear gloves to avoid scraping knuckles across the ground.
7. Colour in the cut cross with a coloured pencil.
8. Check Cut Cross position.

18.21 Setting a Lead Plug

Developed by: 1. Tim Erickson 2._____ Date: July, 2009

Approved by: _____ Position:_____ Date:_____

Revised by: 1. Braden Elke Date: November 16, 2009

Equipment Required	Material Required	Personal Protective Equipment
Hammer	Brass Tack	Regular PPE
Ruler	Lead Tubing	Knee Pads
Drill with 5/8" Bit		Eye Protection
Coloured Pencil		Safety Gloves
Hand Prism		
Scribe		
Chisel		
Dust Puffer		

Job Steps:

1. Put on appropriate PPE including regular PPE, eye protection, gloves, and kneepads.
2. Clear area of any known hazards and protect area with any safety precautions deemed necessary.
3. Mark plug line using a coloured pencil at two points 5cm on either side of the approximate distance location.
4. Measure a distance to a well-defined mark along the pencil line. Calculate the offset from the mark to the target distance of the plug. Make a perpendicular pencil line to the initial pencil line at the target distance (minimum of 10cm in length).
5. Use a scribe to cut the pencil lines into the ground surface, and wear gloves to avoid scraping knuckles across the ground.
6. Drill the center of the cut cross until the hole is approximately 3/4" to 1" deep. (Refer to safe Heavy Drill Procedure)
7. Use dust puffer to clear hole of dust. (Do not Blow the dust with your mouth)
8. By hammering with one hand and rolling the end of the Lead Tubing with the other create a section of round lead that will fit into the hole. Chisel off the lead end so that the lead will fit into the hole with approximately ½" of lead sticking up above the surface.
9. Tap the lead into the hole and hammer to be nearly flush with the ground.
10. Use Cut Cross lines to redraw the target point across the lead surface with a pencil and ruler.
11. Make a guide hole using a nail, tapping it just into the lead surface at the target point. Tap the Brass Tack fully into the lead.
12. Square off the lead plug using a Chisel carefully, as rock fragments sometimes go flying causing eye hazards when squaring off a lead plug.

13. Check plug position.

18.22 Line Cutting with a Machete/ Proper Machete Use

Developed by: 1. Braden Elke Date: November 3, 2009

Approved by: _____ Position: _____ Date: _____

Revised by: 1. _____ 2. _____ Date: _____

Equipment Required	Material Required	Personal Protective Equipment
Machete	N/A	Safety Glasses
		Steel Toed Boots
		Safety Gloves
		Hard Hat
		Long Sleeves/Pants
		Face Shield (optional)

Job Steps:

1. Have the operator point out line and bush to be cut.
2. Ensure PPE is on and machete is in proper working condition.
3. Clear away loose debris from area.
4. Stand with feet shoulder width apart, facing bush.
5. Choose piece to cut, ensure machete path will be clear and swing towards it.
6. "The Swing"
    a. Let shoulder come down, lead with the elbow, swing slightly downward, aim with the "sweet spot" of the machete, flick the wrist just before impact.
7. Clear debris away from the area and repeat steps.

18.23 Blazing and Marking Bearing Trees

Developed by: 1. R.J. Chauhan Date: October 30, 2009

Approved by: _____ Position: _____ Date: _____

Revised by: 1. _____ 2. _____ Date: _____

Equipment Required	Material Required	PPE
Axe	Living Tree	Safety Glasses
Carver		Steel Toed Boots
		Safety Gloves

Job Steps:

1. Ensure PPE is in proper working condition.
2. Remove axe from sheath and inspect to ensure the head is snug on the handle and that the blade is well sharpened.
3. Observe the ground around the tree and make sure that you have proper footing for where you will be slicing the tree from.
4. Stand to one side of the tree at an axe length away with your legs spread in a well-balanced stance.
5. Chop the tree horizontally at the bottom of where you want your bearing tree to be (face it towards where your post is located), forming a wedge at a depth approximately the same as your bearing tree will be.
6. Next start chopping at a downward angle starting at the top of where you want your blaze (again making sure your blaze will be facing the post).
7. Keep exposing the wood until you reach your wedge at the bottom. The wedge should make the blazed wood separate quite easily. Replace sheath.
8. Observe your blaze and make sure it is big enough to fit all of your carvings.
9. Next, take your carving device, and inscribe "BT" and then your measurement taken to the post to the nearest cm, carving your numbers vertically or horizontally if the tree is wide enough.
10. Make sure your carvings are deep enough so that others in the future will be able to clearly identify your markings.

18.24 Boarding a Helicopter

Developed by: 1. A. Shufletoski Date: May 19, 2010

Approved by: _____ Position: _____ Date: _____

Revised by: 1. _____ 2. _____ Date: _____

Equipment Required	Material Required	Personal Protective Equipment
Flag		Safety Glasses, Gloves Steel Toed Boots Hi - Vis

Job Steps:

1. Prepare a landing site for the helicopter
    a. site must be clear of overhead objects (50ft, 15m radius)
    b. site must be flat
    c. site must be clear of debris
2. Wave flag to attract pilots attention
3. As helicopter approaches move to edge of landing site, crouch down, head down, eyes averted with flag at shoulder height
4. When engine changes pitch observe pilot
5. Upon "thumbs up" from pilot, remain crouched and proceed slowly to the front of the helicopter
    a. Carry all equipment underarm

b. Do not carry equipment over shoulder
c. Approach front of helicopter
d. Do not approach rear of aircraft

6. If applicable, place equipment in side basket
7. Open door, use handholds to climb into aircraft
8. Ensure limbs and equipment are clear of door, shut door
9. Fasten seatbelt, don headset and alert pilot when ready

18.25 Chemical Spill Cleanup

Developed by: 1. J. Newton Date: July 21, 2011

Approved by: _____ Position: _____ Date: _____

Revised by: 1. _____ 2. _____ Date: _____

Equipment Required	Material Required	Personal Protective Equipment
Flag		Safety Glasses, Gloves Steel Toed Boots Hi - Vis

Job Steps:

1. Decide if you can safely handle the spill – if not vacate area immediately and get help.
2. Eliminate all ignition sources if flammable material is involved (e.g. gasoline) – Handling equipment must be grounded.
3. Confine the spill to a small area. Do not allow the material to spread. Dike, block or contain the size of spread of liquid spill by using appropriate absorbing material (vermiculite, commercial absorbent, etc). Stop leak only if safe to do so**.**
4. Work upwind of spill if it is safe to do so.
5. Carefully remove other materials, containers, equipment from path of the spill.
6. Sweep solids of low toxicity into a dust pan and place into container for disposal. Dispose of all cleanup materials as hazardous waste. Waste must be properly packaged in a leakproof container, sealed and labelled with a hazardous waste label.
7. Contain spill rapidly by diking with suitable material (kitty litter, vermiculite, etc.). Attempt to prevent chemical from contaminating ground water and sewer system. Cover opening to sewer if able to do so.
8. After removal of spilled material, if the chemical is soluble in water, the area should be washed with warm, soapy water to remove any remaining residue.
9. Do not leave spill site unattended. Wait until assistance arrives.
10. Report the incident to supervisor and Environmental Health and Safety and to the local joint health and safety committee.

19 FATIGUE MANAGEMENT

The UNDERHILL GROUP recognizes that Fatigue is a factor, which may affect a worker's ability to perform mental and physical tasks. Due to the nature of the surveying industry, extended working hours are required. All Party and Crew Chiefs must be able to recognize and respond to the signs and symptoms that might impair the worker's performance due to fatigue.
It is the responsibility of the Party Chief to make corresponding changes to work requirements if signs of fatigue impairment are evident. All concerns must be communicated to management and corresponding changes must be documented for review and follow up.

The signs, symptoms and affect fatigue has on workers varies from one person to the next; however, fatigue may affect the individual worker's ability to perform mental and physical tasks. Underhill has developed some guidelines to try to minimize fatigue due to work over an extended period of time

- a maximum of 10 hours in a workday, only more than that in extreme circumstances. This relates to **all** Underhill work.

- a maximum of 7 hours of chainsaw use a day depending on terrain, this does not include mob/demob from worksite. The maximum is dependent on terrain. If working in difficult or easy terrain, this time may be reduced or increased. This relates to **all** Underhill work.

Land Claim Jobs:
These jobs tend to be the most extensive of the jobs that Underhill undertakes. Often these jobs involve a remote camp situation in which employees are expected to maintain 10 hour days for up to 3 weeks. Underhill tries to keep these standards in such situations:

- entirety of job completed in less than 3 weeks. If expected to last the full 3 weeks or even more, employees will be given at least one day off per 2 weeks or there will be a crew rotation

Mining Camps:
Most mining camps have their own fatigue management strategies. At Underhill we will endeavor to rotate crews as the mine's fatigue strategy schedule permits.

19.1 Responsibilities

19.1.1 Management

- Provide the necessary information about fatigue
- Communicate employer expectations
- Monitor hours worked by each crew
- Review the impact of extended hours in relation to accidents, incidents, quality and quantity of work
- Support employees who are experiencing concerns with fatigue
- Investigate any problems and/or concerns

19.1.2 Party and Crew Chiefs

- Conduct safety meetings discussing fatigue
- Ensure tasks are performed in a safe and healthy manner
- Be aware of the risks associated with extended hours and/or consecutive days of work
- Give workers as much notice as possible if extended hours are anticipated
- Observe how individuals respond to extended hours
- Recognize symptoms of fatigue
- Get feedback from individual crewmembers and the crew as a whole
- Take prompt action if a risk develops
- Relay information to and from management & employees
- Report any fatigue problems, concerns and/or issues

19.1.3 Employees

- Recognize symptoms of fatigue
- Report any individual medical or personnel situations which may have an affect on fatigue
- Take personal responsibility to get proper rest during time off
- Take personal responsibility to deal with home stress
- Be up front with your supervisor if you have any problems

19.1.4 Signs, Symptoms, Factors, and Performance Impairments

Some possible physical signs and symptoms of fatigue are as follows*:*

- Tiredness
- Sleepiness
- Irritability
- Depression
- Giddiness
- Loss of appetite
- Digestive problem
- An increased susceptibility to illness

Some possible performance impairments are:

- Slowed reactions – physical reaction speed and speed of thought
- Failure to respond to stimuli, changes in the surroundings, or information provided
- Incorrect actions – either physical or mental

- Flawed logic and judgment and an increase in memory errors, including forgetfulness
- Decreased vigilance
- Reduced motivation
- Increase tendency for risk-taking

Factors, which may have an influence on fatigue*:*

- Time of day
- Temperature
- Working alone.
- Repetitive or “boring” functions
- Being inactive
- Length and frequency of breaks
- Availability of food and water
- Duration of the extended hours/consecutive day
- Days off
- Type of work
- Job Stress
- Home Stress
- Use of personal time

Some workers cope with fatigue in the following ways:

- Working more slowly
- Checking work more thoroughly
- Using more memory cues or reminder
- Relying on fellow workers
- Choosing to carry out less critical tasks

20 GENERAL RULES

20.1 Mandatory Requirements

Wear all appropriate personal protective equipment required for the task being undertaken as stated in the Safety Work Practices or Safe Job Procedures, as directed by your Party Chief, Health & Safety Officer or Managing Partner, and by industry standards and the Occupational Health & Safety Act

Report to your Party Chief all unsafe acts, unsafe conditions and near miss incidents.

Report all injury or damage accidents immediately.

Perform all work using safe work practices and job procedures in accordance with your Party Chief or safety officer's direction.

Maintain good housekeeping in your work area.

Operate all vehicles and mobile equipment in accordance with site rules and highway regulations.

20.2 Grounds for Dismissal

The following are prohibited at all times on all company property and all company job sites:

- Possession or consumption of alcohol or illegal drugs
- Arriving for work or remaining at work when ability to perform the job safely is impaired
- Possession of firearms
- Fighting, horseplay, practical jokes
- Theft and vandalism
- Damaging, disabling or interfering with safety, fire-fighting or first aid equipment

20.3 Violence in the Workplace

According to WorkSafeBC, "violence" means the attempted or actual exercise by a person, other than a worker, of any physical force so as to cause injury to a worker, and includes any threatening statement or behaviour which gives a worker reasonable cause to believe that he or she is at risk.

When evaluating and inspecting a new work site for potential hazards, a risk assessment must be carried out to determine if there a risk of injury to workers from violence arising out of their employment at the work site. The risk assessment must include the consideration of previous experience in that site, occupational experience in similar workplaces, and the location and circumstances in which work will take place. If there is a risk of violence at the work site, the

Party Chief must report this information immediately to the Managing Partner and Safety Officer so that precautions can be taken. All employees entering a site known to have any risk of violence must be notified of this issue before entering the site.

Any employee reporting an injury due to workplace violence will be directed to a physician.

Violence of any kind will not be tolerated and is considered grounds for dismissal.

20.4 Detailed Rules of Protocol

It is the responsibility of all employees to become familiar with their workplace and to ensure their own safety and the safety of their fellow workers.

Employees using prescription medications, that may affect their ability to safely perform their duties, must advise either the safety officer or their Party Chief of the nature of the prescriptive medication.

Horseplay, roughhousing, or fighting is strictly prohibited. The workplace is no place for practical jokes.

Every worker must report any unsafe condition promptly to his or her Party Chief or safety officer.

Every worker will report to work physically fit and outfitted with clothing, including footwear, suitable for the work to be performed. Unless specifically exempted by a Party Chief, and documented, this means safety-toed footwear, which provides adequate ankle support.

In the event of an accident, ensure that the scene of the accident is left undisturbed, except when it is necessary to do so to prevent injury to other workers or to provide assistance to injured workers.

All accidents, injuries, and near misses must be reported to your Party Chief or safety officer without delay. They will provide the appropriate forms for reporting accidents or injuries.

Ensure that you know how to perform the task assigned to you safely. If you have any doubts or questions, ask your Party Chief. It is more important to understand the way to perform your job safely than it is to go ahead and try something you are not sure of and risk injuring yourself or your fellow workers.

Read all danger and warning labels on containers and equipment. Follow any health/safety precautions as directed on provided MSDS sheets.

Vandalism, theft, or misuse of safety equipment, tools, or other property will not be tolerated. Make sure you have the right tool for the right job and use it properly.

All mobile equipment, including motor vehicles, shall be operated in accordance with site rules and good operating procedures. Seat belts must be worn at all times when operating vehicles equipped with seat belts.

When the job is completed, the work area must be cleaned up, and equipment ready to operate for the next production shift.

Private vehicles must be parked in designated parking areas. Vehicles shall be operated on designated routes and shall not interfere with the use of roadways by residents.

Employees should use only designated sanitation facilities where available. This should be determined during the worksite inspection.

Handrails and guardrails provided for the protection of workers must not be removed or rendered ineffective. All guards provided for the protection of workers must be replaced when the nature of the work requires their temporary removal.

Appropriate fire-fighting equipment must be available on all sites at all times; this includes the maintenance of fire extinguishers.

Good housekeeping is essential to maintaining a safe workplace. It is the responsibility of every Party Chief to ensure that all debris and waste material is removed in a timely fashion so as not to create hazards to workers.

When a building has reached the “closed in” stage, it is the responsibility of the site Party Chief to ensure the building is secured at the end of each shift.

The above rules are minimum rules that are applicable to all corporate sites. Failure to comply with these rules is grounds for discipline, up to and including dismissal.

21 GENERAL HOUSEKEEPING RULES

All job sites will be neat and orderly. A clean work site exhibits pride in the work and reduces the potential for injury. Hazards include: protruding nails, improper storage, blocked exits, accumulations of combustible materials, spills, items that could cause slips, trips or punctures etc.

All materials will be correctly stacked and out of the way.

Tools and equipment will be cleaned, checked for any damage and put away after each use. If there is damage it must be tagged and brought to the attention of the equipment manager or safety officer as soon as possible.

All garbage and material (product) waste will be cleaned up and disposed of daily as per Occupational Health & Safety regulations.

22 DRUG AND ALCOHOL POLICY

22.1 Purpose

- To support our responsibility for and commitment toward our employees to ensure a safe and healthy workplace
- To ensure that all employees of the UNDERHILL GROUP have a work environment which is free of alcohol and drug use or abuse
- To outline the company's expectations and requirements for creating and maintaining an alcohol and drug free work environment, and for dealing with substance abuse in the workplace
- To provide an opportunity for employees with a substance use problem to get well rather than provide grounds for Underhill to terminate such a team member's employment

22.2 Scope

This policy applies to all employees of The UNDERHILL GROUP and also includes visitors and contractors on an Underhill worksite.

1. All employees of Underhill are expected to report fit for duty for scheduled work and be able to perform assigned duties safely without any limitations due to the use or after-effects of alcohol, illicit drugs, non-prescription drugs, or prescribed medications or any other substance.
2. Off the job as well as on the job involvement with alcohol or drugs can have adverse effects upon the workplace, the integrity of our work product, and the safety of others on the worksite. As such, Underhill wants to impress upon all employees that it has zero tolerance for employees who arrive at work under the influence of alcohol or drugs, and/or whose ability to work is impaired in any way by reason of the consumption of alcohol or drugs (i.e. hung-over), or who consume alcohol or drugs at a worksite.
3. Underhill strictly prohibits the use of, unlawful manufacture of, sale, purchase, offer to purchase or sell, transfer, distribution, consumption, or possession of drugs or alcohol on an active work site. Any employee found participating in any such actions will be subject to disciplinary action, up to and including termination of employment.

22.3 Roles & Responsibilities

It is the responsibility of all employees to identify a situation in which they have concerns about an individual's immediate ability to perform their job and take the appropriate steps. Where necessary, Party and Crew Chiefs will remove any team member who is suspected of violating the provisions of this policy from any worksite.

The following requirements are meant to provide supervisors with guidance on how to administer this policy; however, not every situation can be predicted.

1. If an employee, visitor or contractor arrives at an Underhill worksite or company property and you have reasonable cause to suspect that the employee, visitor or contractor is under the influence of alcohol or drugs, the Party or Crew Chief shall immediately remove them from the work environment. In the event you have any doubt as to whether the team member is or is not impaired, you should err on the side of caution and remove them from the worksite.

2. Unexpected circumstances can arise when an off-duty team member is requested to work. It is the employee's responsibility to refuse the request and ask that the request be directed to another person if the employee is unfit due to the influence of alcohol or other drugs.

3. Employees who are prescribed medication are expected to consult with their personal physician or pharmacist to determine if medication use will have any potential negative effect on job performance and if so, are required to alert their Party or Crew Chief.

4. If an employee or contractor believes a Party or Crew Chief is in violation of this policy, they are encouraged to inform the Health & Safety Officer or Managing Partner and allow them to investigate further.

5. In support of those who may have developed or are developing chemical dependence, all employees are required to report any violations of this policy by other employees to the Health & Safety Officer for documentation.

22.4 Policy Violations & Procedures for Party and Crew Chiefs

Where the situation dictates that a witness is required to corroborate a reasonable suspicion that an employee, visitor or contractor is under the influence, Party and Crew Chiefs must seek corroboration from two of the following individuals in the sequence set out below:

1. A fellow Crew or Party Chief

2. Health & Safety Officer

3. Managing Partner

22.5 Assistance & Rehabilitation

The UNDERHILL GROUP recognizes the fact that a certain percentage of the population may develop a chemical dependence. This is characterized by denial of the dependence by those who suffer from it.
Underhill also recognizes that dependency on alcohol and/or drugs can be successfully treated, and encourages employees with such dependencies to seek help to gain control over their dependency.

Employees are expected to recognize that problems related to alcohol and drug use or dependency are not an excuse for poor or unsafe performance. Employees who suspect they have a dependency are encouraged to seek counseling promptly or confer with the Health & Safety Officer or Managing Partner for options.
Employees who voluntarily request assistance in dealing with such issues will be treated with respect and, to the highest extent, all related information will be treated in confidence. However, full participation in any company recommended or funded program is expected. The employee will be accommodated by being provided with modified duties if required, assigned to alternate duties where possible, or placed on the appropriate leave. Participation in these programs does not preclude the requirement to regain satisfactory performance.

23 DISCIPLINE

The UNDERHILL GROUP has developed this Occupational Health and Safety Program to foster and promote safety and health in our workplace. Upon commencement of employment, all new employees of the UNDERHILL GROUP will be supplied with a copy of this program. In addition, the contents of the OH&S Program will be discussed with all new employees.

The UNDERHILL GROUP welcomes the input of all employees regarding the contents of our safety program and encourages your active participation in the program. We expect that employees will immediately bring to the attention of management any concerns they have regarding safety.

Initially, concerns should be brought to the attention of your Party Chief. However, if you are not satisfied with the manner in which your Party Chief has dealt with any matter, we encourage you to bring the matter to the attention of your safety officer.

Failure to comply with safety requirements of The UNDERHILL GROUP safety program is considered a serious breach of discipline. Therefore, the following procedures will apply where workers fail to comply with the requirements of this program.

- First offence will result in a verbal warning, which will be documented on your employee personnel file.

- Second offence will result in a written reprimand or in more serious cases, suspension or termination of employment.

- Third offence will always result in a minimum of suspension from employment. For more serious violations, the penalty will be termination of employment.

There will be no fourth offences!

24 KEY PERSONNEL, EQUIPMENT AND CONTROLS

24.1 KEY PERSONNEL

1. OWNERS/PARTNERS (MANAGERS)

2. HEALTH & SAFETY OFFICER

3. PARTY CHIEFS

4. CREWS

24.2 KEY EQUIPMENT

Regular survey gear

Personal Protective Equipment

Vehicles

All terrain vehicles

Chain saws

First Aid kits

25 PERSONAL PROTECTIVE EQUIPMENT (P.P.E.)

The UNDERHILL GROUP supplies necessary personal protective equipment for its employees.

Protective equipment appropriate for the work to be done must be worn. Failure or refusal to use the proper protective equipment and clothing is cause for disciplinary action.

The Yukon Worker's Compensation Health & Safety Board has put new fines in place for noncompliance of PPE regulations. These are: $50 to employee, $250 for the Party or Crew Chief and $500 for the Company. Be sure to wear your PPE.

The following will be observed and practiced by the company's employees, guests, and visitors when in areas deemed to be hazardous:

- All employees will wear safety glasses, safety boots, hard hats, hearing protection, and any other specialty P.P.E. required.
- All P.P.E. used will meet CSA standards, Provincial/Territorial Health and Safety Requirements, as well as those of any prime contractor.
- All P.P.E. will be in good condition and maintained according to manufacturer's instructions.
- Company issued P.P.E. will be inspected and signed off by employees at time of issue.
- Employees will check P.P.E. before each use to ensure that it is fit for use.

All P.P.E. that is of questionable reliability, damaged, or in need of service or repairs will be removed from service immediately. Upon removal from service, P.P.E. will be tagged "out of service". P.P.E. that has been tagged will not be returned to service until repaired and inspected by qualified personnel.

The company will maintain appropriate inspection and service logs for specialty P.P.E., chainsaws and company issued equipment.

P.P.E. may be stored in operators' vehicles and transported to individual sites as required.

No person, including engineers, office visitors, the public, inspectors, clients, or contractors, is allowed on any UG site without the appropriate safety gear.

The following sections provide details on some personal protective equipment and where it should be worn.

25.1 Clothing and Accessories

Personnel working around rotating equipment or machinery must not wear loose-fitting or ragged clothing, jewelry, or watches, as these items may catch on rotating or moving equipment and cause serious harm.

Employees will wear clothing that is appropriate to the environment where the work is being performed.

We recommend that employees wear clothes made of fire resistant fabric, fabric topically treated with a fire retardant or a fabric high in natural fibers such as cotton or wool, but it isn't mandatory. Clothing containing flammable synthetics, such as nylon or rayon, is discouraged, as these materials melt and stick to the skin in a fire.

25.2 Gloves

Gloves should be worn whenever handling materials that might injure the hands. These injuries usually fall into the category of cuts from glass, splinters and nails projecting from wood. Gloves must be short and tight fitting. Gauntlet style gloves are not allowed as they may get caught in machinery. Along with steel-toed boots, employees will supply their own gloves.

25.3 Goggles

Wear goggles when:

- Hazards or potential hazards to the eyes exist
- Scraping, grinding, or breaking any material from which a chip could fly into the eye
- Working where dust, rust, or other foreign material is blowing

25.4 Boots

Boots will be supplied by the employee and will be CSA approved steel-toed boots. For winter and wet conditions specialty type boots may be supplied by the UNDERHILL GROUP, such as cork style spiked boots.

25.5 High-Visibility Vests

When exposed to traffic hazards, wear brightly colored vests or have lights or clearly visible signs to assist in visibility and protection.

25.6 Fire Retardant Work Wear

All employees, contractors and visitors are required to wear coveralls that are fully flame retardant while working on any UG site where a fire hazard exists. Other fire retardant work-wear such as pants and jackets may be worn with the approval of your Party Chief. Employees must wear fire retardant coveralls and ensure that all undergarments are also made of 100% cotton or other fire retardant materials. Under no circumstances are workers to wear nylon or other static producing fibers in locations where fire hazards exist. Fire retardant work-wear will be supplied when required.

25.7 Hearing Protection

Appropriate hearing protection must be worn in areas where the sound levels exceed 85 dBa. Refer to Yukon/ WorkSafeBC Occupational Health and Safety regulations or your safety officer for more information.

25.8 Respiratory Protective Equipment (Breathing Apparatus)

Party Chiefs and employees are responsible for ensuring proper and adequate respiratory equipment is worn whenever there may be exposure to airborne contaminates or where the atmosphere is or may be oxygen deficient.

Approved respiratory protective equipment will be readily available and used when toxic or volatile chemicals have been identified or suspected in a given location.

A code of practice for the selection, use and maintenance of respiratory protective equipment must be readily available at each location where respirators are stored for use.

25.8.1 Proper Fit

All employees, contractor employees, and visitors who risk exposure to toxic fumes or vapor must be clean-shaven where the face piece of the respirator seals with the skin of the face. Conditions such as unusual face contours, scars, eruptions, eyeglasses, or missing dentures may interfere with the seal. For this reason, the mask must be fit tested and a satisfactory fit obtained prior to each use. Most manufactures provide instructions for field-testing; if these are not available, contact your Party Chief.

All contractors and subcontractors are to ensure that the required numbers of self-contained breathing apparatus are available and in working order, and that all personnel are trained in their use and limitations.

25.9 "Info Sheet" for Head Protection

25.9.1 General Information

Hard hats provide head protection. They must be worn on any job where there is a danger of injury to a worker’s head. A hard hat must never be worn without a properly adjusted suspension, as this is what provides the required margin of safety.

Safety headwear is designed to protect the head from impact from falling objects, bumps, splashes from chemicals or harmful substances, and contact with energized objects and equipment.

In construction, the recommended type of protective headwear is a hard hat that has the required "dielectric strength." There are many designs, but they all must meet CSA requirements for Class G (General Usage) and Class E (Electrical trades).

Most head protection is made up of two parts:

The shell (light and rigid to deflect blows)
The suspension (to absorb and distribute the energy of the blow)

Both parts of the headwear must be compatible and maintained according to manufacturer's instructions. If attachments are used with headwear, they must be designed specifically for use with the specific headwear used. Bump caps or laceration hats are not considered safety helmets.

25.9.2 Inspection and Maintenance

Proper care is required for headwear to perform efficiently. Its service life is affected by many factors including temperature, chemicals, sunlight and ultraviolet radiation (welding). The usual maintenance for headwear is simply washing with a mild detergent and rinsing thoroughly.

25.9.3 Do

- Replace headwear that is pitted, holed, cracked or brittle;
- Replace headwear that has been subjected to a blow even though damage cannot be seen;
- Remove from service any headwear if its serviceability is in doubt;
- Reverse suspension inside headwear if worn backwards;
- Replace headwear and components according to manufacturer's instructions; and
- Consult applicable legislation or your supplier for information on headwear.

25.9.4 Do Not

- Drill, remove peaks, or alter the shell or suspension in any way;
- Use solvents or paints on the shell (makes shell "break down");
- Put chin straps over the brims of certain classes of headwear;
- Use any liner that contains metal or conductive material; or
- Carry anything in the hard hat while wearing the hard hat.

For more information, look at:
CSA Standard "Industrial Protective Headwear"
ANSI Standard

25.10 “Info Sheet” for Eye & Face Protection

General Information

This PPE is designed to protect the worker from such hazards as:
Flying objects and particles
Splashing liquids
Ultraviolet, infrared and visible radiation (welding)

There are two types of PPE:

1. "basic eye protection" includes:
- Eye cup goggles
- Monoframe goggles and spectacles with side shields

2. "face protection" includes:
- Metal mesh face shields for radiant heat or hot and humid conditions
- Chemical and impact resistant (plastic) face shields
- Welders' shields or helmets with specified cover filter plates and lenses

Hardened glass prescription lens and sport glasses are not an acceptable substitute for proper, required industrial safety eye protection.

Comfort and fit are very important in the selection of safety eye wear. Lens coatings, venting or fittings may be needed to prevent fogging.

Basic eye protection should be worn with face shields. Face shields alone often are not enough to fully protect the eyes from work hazards. When eye and face protection is required, advice from specialists, information on Material Safety Data Sheets (MSDS) for various chemicals, or your supplier will help you select such protection.

For more information, refer to:
WorkSafeBC or Yukon's Occupational Health and Safety Act, Regulation and Code
Standards for "Industrial Eye and Face Protectors"

25.10.1 Do

- Ensure your eye protection fits properly (close to the face) and is comfortable;
- Clean safety glasses daily, more often if needed;
- Store safety glasses in a safe, clean, dry place when not in use; and
- Replace pitted, scratched, bent and poorly fitted PPE. (Damaged face/eye protection interferes with vision and will not provide the protection it is designed to deliver.)

25.10.2 Do Not

- Modify eye/face protection; or
- Use eye/face protection that does not have a proper certification. (Various markings or the safety stamp for safety glasses are usually on the frame inside the temple near the hinges of the glasses.)

*For further Information refer to the appropriate current Occupational Health and Safety Legislation or CSA Standards.

26 HEALTH, SAFETY, AND ENVIRONMENTAL EQUIPMENT

As a minimum, all field operations (camps) will have the following health, safety, and environmental equipment on site:

Vehicle for emergency transportation

First Aid Kit (Provincial/Territorial OH&S and WCB minimum standard)

Personal Protective Equipment (as required for the work to be performed)

Spill Response kits

Fire Extinguishers

27 PREVENTATIVE MAINTENANCE PROGRAM

27.1 Equipment Maintenance

Party Chiefs, employees and the equipment manager/safety officer must perform preventative maintenance to catch potential problems before they cause accidents/incidents. To do this the UNDERHILL GROUP has developed a three-tiered process for maintaining equipment.

27.1.1 Tier One – Company Issued Equipment

At hire a form is issued indicating what equipment is provided for or by the new employee and what condition the equipment is in when it is issued. For seasonal workers, the equipment is inspected upon return to the company to insure that it is in workable condition. If not, the equipment is tagged out for repair.

27.1.2 Tier Two – Truck Outfitting

For each truck an inventory list has been created with all the necessary equipment needed. Equipment on the list is inspected before being outfitted and checked off. To ensure the equipment is maintained, scheduled inspections are done in the spring and fall for all equipment during down time.

27.1.3 Tier Three – Specialty P.P.E. & Equipment

For specialty P.P.E. and equipment a logbook is in place. Employees must ask the managing partner, equipment manager or Health & Safety Officer for issuance of specialty equipment. Either the employee or issuer fills out the logbook, noting the issued and returned condition.

A similar procedure is followed for chainsaws. Saws have been numbered and their maintenance records are kept separately and by saw number. Saws are locked at all times to prevent theft and unauthorized usage.

Operators of chain saws are required to gain an intimate knowledge of their equipment by:

- studying the manufacturer’s operating manual and becoming familiar with the capabilities and limitations of each piece of equipment as well as taking training courses.
- learning the warning signs and sounds of their equipment.

Party Chiefs and equipment managers are to ensure that company owned equipment is inspected as per the preventive maintenance program and that proper maintenance and upkeep are completed. For rented equipment, the UNDERHILL GROUP’S Party Chiefs and equipment managers must request and ensure specific maintenance is completed by the rental company or subcontractor.

27.2 Equipment Inspections and Tag Out Procedure

In order to catch any minor problems before they cause accidents, Party Chiefs and crews must do a pre-shift inspection of the equipment and note any relevant information in the "Daily Safety Checklist." Twice a year, in the spring and fall, all equipment is to be checked. If not in workable condition that equipment is tagged out for repair.

When equipment is found to be faulty in any way it is brought in to the head office and into the workshop or equipment room for tag out. The equipment manager must be informed and the tag must be filled in entirely indicating:

- The person tagging out the equipment
- The date
- What the problem is and how it happened

The equipment manager assesses the damage and the servicing required. On the Equipment Service Log sheet the equipment is listed, what needs to be fixed and how, if sent out – to whom or what company the equipment has been sent and the dates the equipment came in and out. Once the equipment is repaired the tag is removed and the equipment is put back into service.

28 SAFETY MANAGEMENT COMMUNICATIONS

The UNDERHILL GROUP has established a safety management communications system that parallels its management structure. Safety information is passed both ways between head office and field workers on a regular basis.

At each job site, Party Chiefs monitor for safety performance. Be sure that you do your part to contribute to a safe work site.

28.1 Communication and Group Meetings

Effective communication between all levels of employees is necessary to monitor and improve work procedures and safety.

28.1.1 Safety Meetings

Depending on circumstances, safety meetings are held as often as possible, usually daily via "toolbox" meetings and monthly as standard safety meetings. These are used in order to effectively cover immediate and long-term safety concerns. Pre-job, or tailgate meetings, can be used to discuss safety concerns specific to the particular job at hand. Safety meetings will also be used for additional training and to encourage worker input and communication. Meetings are held both by field workers in the field and by managers and safety officers in the head office.

Topics covered in safety meetings include reviews of recent accidents and safety precautions to prevent their reoccurrence, new safety procedures and materials, new policies, or new technology. These meetings are tailored to the specific needs of the location and scheduled to allow for open discussion.

Attendance records and minutes of these meetings must be kept for review and recording.
Monthly Safety Meeting Minutes are reviewed after the safety meeting by the Health and Safety Committee, which consists of the Managing Partner and the Safety Officer.

28.1.2 Safety Posters and Bulletin Boards

Every office has at least one bulletin board where safety posters can be displayed to identify safety hazards and support the instruction given in safe work procedures. Meeting minutes and legislation changes are also displayed. Vehicles on a jobsite away from the offices will have this safety manual and a set of OH&S regulations available.

The safety bulletin board is in a conspicuous location where workers gather for information, in a lunchroom or in work areas.

28.1.3 Training Records

To ensure training is kept up to date, detailed records of participants, topics, dates, materials provided and follow-up programs are kept. Safety officers and managers use this information in meeting regulatory requirements, planning future training programs, assessing the effectiveness of past programs and assessing individual employee safety performance. Records will be kept of all training programs that the employee has received while with the UNDERHILL GROUP.

28.1.4 Safety Suggestions

Every UG employee and Party Chief is responsible for making suggestions on how to make jobs more safe and efficient. These suggestions can be discussed daily at toolbox meetings or at the monthly safety meetings. There are also “Safety Suggestion Forms” which can be obtained in the safety office or from the Health & Safety Officer.

All unsafe conditions must be reported immediately to Party Chiefs.

More importantly, employees are encouraged to do their part to think of and use safe work methods in every aspect of every job. If employees are uncertain of safe methods they are encouraged to ask, and if they have safer methods, they are encouraged to suggest. If desired, any suggestions can be made in private or anonymously.

All suggestions will be reviewed by on site Party Chiefs and then by other levels of management.

29 MOTIVATION AND EDUCATION

This section reviews the types of training available to the UNDERHILL GROUP'S employees and how the training is provided. It also discusses training records and safety suggestions.

29.1 Training Types

A well-trained and qualified worker is usually a safe, efficient, and conscientious employee. This company endeavors to hire workers who are adequately qualified, are suitably trained, meet government training requirements and have sufficient experience to do the work required. Records of employee training are kept for review and help determine courses needed or required.

29.2 New Employee Safety Training

Every employee and contractor who is new to a job site is to receive safety training appropriate to the job and the job site. This training includes an orientation. No new employee is allowed on a UG site unless he or she has been given a thorough orientation by a UG Party Chief or a person designated by the Party Chief to perform the orientation. Topics covered will include:

- a complete review of UG safety policies and procedures
- specific hazards that may be encountered on the site
- safety precautions
- a review of the safety responsibilities and expectations of the UNDERHILL GROUP, its contractors, Party Chiefs and employees
- a review of pertinent OH&S and other government regulations
- other on-and-off the job site expectations and conduct
- the right to refuse to perform unsafe acts or work
- security measures and responsibilities
- safe work procedures orientation
- Instructional safety videos (Bear awareness, basic chainsaw safety and helicopter safety)
- WHMIS/TDG instruction (if applicable)
- P.P.E. instruction

29.3 Party Chief Safety Training and Retraining

The UNDERHILL GROUP employs only Party Chiefs who have adequate education or experience and appropriate certification for their jobs. Party Chiefs are also exposed to additional training such as:

29.3.1 Training Courses

Party Chiefs are trained in overseeing and managing technical work, including all procedures of the safety program. They are also trained in regulatory requirements and hazard recognition, inspections and audits, and interpersonal communications.

Party Chiefs are encouraged to expand their knowledge further by taking courses and seminars in new design, operations, construction techniques, safety management, and techniques that will make them more proficient in running safe and effective job sites.

29.4 Management Safety and Loss Control Training

Because of management accountability, UG management is exposed to two forms of training:

Formal training: Managers and safety officers are trained in specific aspects of safety and health loss control such as leadership and administration, planned inspections, job/task analysis, accident/incident investigation and emergency planning.

Safe Work Procedures Training: All staff will be trained in the safe job procedures that are pertinent to their respective positions.

29.5 Safe Driving Program

Before allowing employees to drive company vehicles management will request a drivers abstract and a copy of the drivers license from the Territorial or Provincial licensing offices. Employees will be expected obey all operational laws.

29.6 Fire Training

It is vitally important that all workers know how to use and operate the fire equipment provided by the company. Suppliers may provide training for company employees in the use of their fire equipment, and Party Chiefs will provide training talks and hands-on practice.

29.7 Hazardous materials (W.H.M.I.S.) Training

Underhill will ensure that employees are familiar with any hazardous biological or chemical substances that they may be exposed to, and will provide training regarding the safe exposure limits, spills and emergency clean up procedures.
WHMIS legislation includes the federal Hazardous Products Act, the Controlled Products Regulations, the Ingredient Disclosure List, the Hazardous Materials Information Review Act and Regulations, The Canadian Labor Code, and Provincial/Territorial Occupational Health and Safety Legislation. Training in WHMIS is provided when needed, with a minimum of yearly updates for all staff.

29.8 First Aid Training

Every UNDERHILL GROUP field Party Chief must have, as a minimum, a standard first aid certificate. CPR training is also required. If the job requires more highly trained persons, they will be provided. Adequate first aid supplies are provided and are highly visible. All workers are shown the first aid stations on the work site as a part of their orientation.

29.9 H_2S Training

Any employees and/or contractors who may work near H_2S will take, as a minimum, the 8 hour H_2S awareness course certified by ENFORM or equivalent. Workers working within H_2S environments must take the 16 hour H_2S rescue course that has been certified by ENFORM.

29.10 Respiratory Protective Equipment Training

Party Chiefs are responsible for determining when R.P.E. is needed, selecting, and approving purchase of appropriate equipment, and training employees in its use. Both Party Chiefs and employees are responsible for ensuring that proper and adequate R.P.E. is worn whenever there may be exposure to airborne contaminates, or when the atmosphere is, or may be, oxygen deficient.

29.11 Cold Weather Survival Training

Where applicable, industry courses in cold weather survival are presented.

29.12 Snowmobile and ATV Safety Training

Where applicable, industry courses in snowmobile and ATV safety are presented.

30 TRAINING METHODS

The UNDERHILL GROUP offers a variety of methods for training its employees, as are described below:

30.1 On-the-Job Safety Training

Party Chiefs provide assistance in the day-to-day safe way to work. Part Chiefs review the Site Evaluation Process on a peer-to–peer basis and train field workers to understand the issues in hazard identification. The daily and monthly safety meetings provide further safety training, as do special safety courses, speakers, engineers, and tradesmen.

Employees are further encouraged to learn safety techniques and methods by attending industry technical and safety courses.

Good training has been proven to prevent accidents on the job.

30.2 Tailgate Safety Meetings

Where job site circumstances require it, workers gather every day for instructions from the project or operations Party Chief regarding the work for that day. At least five to ten minutes are devoted to discussing how to do the job safely.

30.3 Monthly Safety Meetings

Every month and, at least, one hour safety meeting of all on site employees will be held. This may be used as a safety training or orientation session where speakers or trainers may be asked to make a presentation.

Attendance records and minutes of these meetings will be kept for review and recording.

On all sites with only one or two employees, a monthly hazard review could take the place of safety meetings.

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31 FORMAL INSPECTIONS

All formal inspections will be conducted by the health and safety officer.

All planned inspections will be done according to a schedule based on the parameters of the job to be inspected.

The basic procedure for a planned inspection will include the following:

- Review previous inspection reports
- Begin the formal inspection tour
- Avoid being led – "Get off the main route."
- Check thoroughly
- Observe the work habits of personnel
- Record all violations, unsafe work habits, and environmental concerns
- Take immediate corrective action when there is any imminent danger situation
- At the end of the tour, rank all unsafe acts using a condition of "A worst case scenario"
- Assign a person to be responsible for each corrective action and assign a date/time for completion
- Follow up to ensure corrective action is completed
- Distribute copies of the inspection report to all employees at safety meetings and to the managers

32 INFORMAL (ONGOING) INSPECTIONS

Through informal or ongoing inspection, done at every new worksite, the UNDERHILL GROUP will identify and control hazards and unsafe work procedures in the workplace before an incident or accident occurs.

Informal inspections will be done through safety inspections run by the health and safety officers or Party Chiefs and their crews.

During inspections, any situation that has the potential to cause injury or damage will be identified and corrective action will be initiated.

The use of daily safety checklists and hazard assessments are also a type of informal inspections. Review of these documents will help management and safety officers determine what procedures and hazards are safe and which are not.

33 INCIDENT/ACCIDENT INVESTIGATION AND FOLLOW-UP

This section discusses the procedures used to document and investigate all incidents and accidents on UG work sites.

33.1 Reporting and Investigation Procedures

All accidents and incidents (including near misses), no matter how small must be reported to the immediate Party Chief. The Party Chief is to fill out an incident investigation report and forward it within 48 hours to the health and safety officer. In the case of major accidents, more extensive loss reports will be required. Refusal to work for safety reasons must be documented by the Party Chief and investigated by the Safety Officer.

All of the following must be reported:

- all injuries requiring medical attention
- motor vehicle accidents
- fire or explosion
- property damage (including equipment)
- liability
- theft
- spills of chemicals, hydrocarbons, or produced water
- business interruption/equipment failure
- sabotage
- unsafe working environment
- near misses

Also, in cases of injuries/illnesses requiring medical attention:

All illnesses/injuries are to be recorded on an “Incident Investigation Report” filled out by the employee and reviewed by the safety officer – near miss reports are especially encouraged as it will help management develop safer job procedures and practices.
All employees are responsible for advising their Party Chiefs immediately in every case of an illness/injury.

All pertinent WCB forms are to be filled out by both Party Chiefs or managers and employees, only if there is a loss of time and if a doctor has been consulted.
These include:

- Doctor’s First Report
- Functional Abilities Form
- Employee WCB Form
- Employer WCB Form

All occurrences are investigated and analyzed to determine measures for preventing their reoccurrence. The investigation team consists of the Party Chief from the accident scene, the safety officer and managing partner, and the employees involved.

33.2 Incident Analysis and Follow-up Recommendations

Every incident is reviewed first by the Party Chief and the safety officer, then the managing partner. The safety officer and managing partners are provided training on investigation techniques. Work procedures will be changed where necessary and where better and safer methods are found. All recommendations to prevent accidents will be reviewed and acted upon by UG managing partners and safety officers.

33.3 Major Incident Loss Reports

The UG safety officer, and managing partner will review in detail every major accident in the company.

33.4 Circulation of Incident Information

Whenever incidents occur they are reported on the Party Chief's "Incident Investigation Report", which is sent to the main office safety officer and managing partner, who then will chose to send it to the office of the prime contractor. The managing partner and safety officer determine what caused the accident and develop a procedure or practice to prevent the accident from occurring the future. A copy of this procedure will be posted on bulletin boards and presented at the next safety meeting for the general staff. With any incident report, but especially near miss reports, if the employee concerned wishes it, the name on the report will be kept confidential.

34 RETURN-TO-WORK POLICY

The UNDERHILL GROUP will cooperate with employees in returning injured/ill workers to safe and suitable employment as per the options identified by the company, Yukon Workers Compensation Health and Safety Board and WorkSafeBC for the worker injured on the job in accordance to the Board's Rehabilitation Policies. (*See YWCHB website at: www.wcb.yk.ca or WorkSafeBC website at: www.worksafeBC.com for more information)*

The company will develop a return to work plan with workers by having an authorized representative contact the worker as soon as possible after the injury. The plan will be based on the individual needs of each worker based on information provided by their physician. If an employee is unable to return to their pre-injury position as a result of a work related injury/illness, the company will consider alternate options.

All workers will be treated fairly and consistently and if injured/ill employees are encouraged to participate and cooperate in the Return-To-Work plan developed.

Any personal information received or collected will be held in the strictest of confidence and will only be released if required by law or by the approval of the worker.

This statement will be reviewed at least annually and may be updated or changed as required.

Date: November 2009

34.1 Modified Work Program

What is a Modified Work Plan?
Management may present a Modified Work Plan to the employee in an effort to help the employee return to work in a timely manner. The plan may state the following information;

- Specific job duties to be performed
- Hours of work
- Length of modification
- The plan, if developed, will be signed by the employee and management and a copy forwarded to the appropriate governing body

Occupational rehabilitation studies and programs have shown that employees who are engaged in some form of structured modified work program recover more quickly.

Offer
The Modified work plan would be developed in cooperation with the injured employee and their physician, the company, and WCB. If the employee prefers not to participate in the modified work program, the company and the employee need to record the reason why, and inform WCB.

34.1.1 Responsibilities for the Modified Work Program

(See Section 3.1.1. for all safety responsibilities and Section 9 & 31 for incident reporting procedures)

Management
Management will:

- Support the use of modified work
- Assist in the identification of innovative modified work assignments
- Follow up on the plan as necessary

Crew Chiefs

- Ensure assigned work duties of injured employee comply with the stated work restrictions listed in the Modified Work Plan. This should be done with the assistance of the Health & Safety Officer

Employees

- Consider participating in the rehabilitation program
- Accept the modified work offered to them with the consent of their physician

34.1.2 Procedures:

***When a serious injury occurs*:**

- Follow the reporting procedures in sections 9 & 31
- Ask your physician for a Return to Work Functional Abilities form or something similar, and instruct the doctor that Underhill will provide modified or light work and cooperate in any medical treatment
- If you are cleared for a Modified Work Plan, you will most likely be assigned to a very low physical exertion and self-paced job (i.e.; safety training). Where the physical condition persists for more than two weeks you can expect to progress to light and then medium duties before returning to your regular job.

Return to Work

When the employee reports for modified work, management shall monitor the employee's progress.

When the employee receives written medical clearance to return to regular duties, management will provide a copy of the clearance letter to WCB. Management will continue to monitor the employee's progress.

Underhill will make all *reasonable efforts* to accommodate employees injured on the job and help them return to work.

35 COMMUNITY AWARENESS

During general day-to-day operations, the safety of the public must always be considered. The UNDERHILL GROUP and its subcontractors are not to create unnecessary safety concerns among neighboring residents. Communities protest excessive noise, trespassing, speeding, road damage, pollutants, and nauseating smells. Employees disregarding these concerns may be disciplined.

35.1 Typical Community Contacts:

Mayor
City Council
Police
Bylaw Officer
First Nations Band Office
Individuals who may be affected by ongoing work.

36 ERGONOMICS

Underhill Geomatics Ltd. aims to provide a healthy and safe work environment for its employees by ensuring that risk factors that may contribute to the development of MSI's (Musculoskeletal Injuries) are identified, assessed and eliminated or mitigated.

MSI are injuries of soft tissues (muscles, joints, tendons, ligaments, cartilage) and nervous system. The most common examples include repetitive strain injuries such as tendonitis and carpal tunnel syndrome, and back injuries involving muscles, ligaments, and/or spinal discs.

Risk factors that can increase the likelihood of a worker suffering an MSI can be found in a wide variety jobs and work procedures. These factors include but are not limited to:

- Use of excessive Force
- Highly repetitive movements
- Awkward and/or static postures
- Manual handling of heavy loads
- Poor tool, equipment, or workplace design
- Poor work organization (lack of task variety, excessive work pace, etc.)
- Cold temperatures
- Vibration

Underhill will use the following process to reduce the risk of MSI in our workplace and will consult with employees during each step of the process:

- Education of workers about risk factors, signs and symptoms
- Risk Identification of jobs with MSI risk factors
- Risk Assessment to determine the degree of risk to the workers
- Implementation of engineering and administrative controls to reduce the identified risk conditions
- Education and training of management and workers of the control measures

The ergonomics policy and related MSI risk assessments will be reviewed annually or when the need arises due to a change in process.

37 CONTRACT SYSTEM

When Underhill is part of a project where workers of two or more employers are working at the same time, the project owner may make one of them the prime contractor. As a sub-prime contractor, Underhill employees will ensure that they receive site orientation before work commences, and work with the prime contractor to ensure worksite health and safety.

As a prime contractor, Underhill will ensure that the activities of employers, workers and other persons at the workplace relating to occupational health and safety are coordinated. A site orientation will be provided to all workers before work commences and will include the following topics:

- Known hazards on site
- Site Emergency Response Plan
- Safe Work Instructions
- Personal Protective Equipment
- Location of:
    - First Aid Kit
    - Fire Extinguisher
    - MSDS
    - Toilets
    - Lunchroom

All sub-contractors will sign the site orientation form to acknowledge understanding, and the forms will be kept past the completion of the job.

38 EMPLOYEE STATEMENT OF UNDERSTANDING

This is to certify that I, _____, have read and understood the contents of the preceding documents, and that I will abide by all policies and regulations therein.

Mandatory Documents:

Health, Safety and Environmental Manual

Occupational Health and Safety Regulations

Occupational Health and Safety Act

Employee:	Date:

Health and Safety Officer:		Date:

39 Emergency Response Number List

Beaver Creek:
RCMP - 862-5555
Fire - 862-2222
Ambulance - 862-3333
Nurse - 862-4444

Burwash Landing:
RCMP - 867-634-5555 (Collect)
Fire - 841-2221
Ambulance - 841-3333
Nurse - 841-4444

Carcross:
RCMP - 821-5555
Fire - 821-2222
Ambulance - 821-3333
Nurse - 821-4444

Dawson:
RCMP - 993-5555
Fire - 993-2222
Ambulance - 993-3333
Nurse - 993-4444

Destruction Bay:
RCMP - 993-5555
Fire - 993-2222
Ambulance - 993-3333
Nurse - 993-4444

Elsa/Keno City/Mayo (dial 867 first if in Elsa or Keno):
RCMP - 996-5555
Fire - 996-2222
Ambulance - 996-3333
Nurse - 996-4444

Faro:
RCMP - 994-5555
Fire - 994-2222
Ambulance - 994-3333
Nurse - 994-4444

Haines Junction:
RCMP - 634-5555
Fire - 634-2222
Ambulance - 634-3333
Nurse - 634-4444

Old Crow:
RCMP - 966-5555
Fire - 966-2222
Ambulance - 966-3333
Nurse - 966-4444

Pelly Crossing:
RCMP - 537-5555
Fire - 537-3000
Ambulance - 537-3333
Nurse - 537-4444

Ross River:
RCMP - 969-5555
Fire - 969-2222
Ambulance - 969-3333
Nurse - 969-4444

Tagish:
RCMP - 867-821-5555 (collect)
Fire - 399-2222
Ambulance - 399-2222
Nurse - 867-821-4444

Teslin:
RCMP - 390-5555
Fire - 390-2222
Ambulance - 390-4444
Nurse - 536-4444

Watson Lake:
RCMP - 536-5555
Fire - 536-2222
Ambulance - 536-4444
Nurse - 536-4444